



Final Report

## **GSA Seismic Rating**

March 31, 2016 #2015-104S

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# GSA SEISMIC RATING SYSTEM EXECUTIVE SUMMARY

March 31, 2016

The proposed seismic rating system utilizes the HAZUS AEBM methodology as a tool to define the relative seismic risk among buildings in GSA's inventory.

HAZUS is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods and hurricanes. HAZUS (seismic) was launched in 1997 by the Federal Emergency Management Agency (FEMA). HAZUS AEBM (Advanced Engineering Building Module) was released in 2003, as an adaptation of HAZUS earthquake methodology for use in single buildings.

In mid to late 2000's, the California Office of Statewide Health Planning and Development (OSHPD), the Agency responsible for hospitals in California, adapted HAZUS AEBM as a "screening tool" to evaluate life safety risk to occupants of California Acute Care Hospitals. In 2010, HAZUS AEBM methodology was adapted by the Department of Veterans Affairs for seismic risk assessment of (VA) Hospital Buildings.

The HAZUS AEBM methodology has been adapted to this project as follows:

- For buildings in California, the methodology follows the modifications as outlined by OSHPD in the California Administrative Code 2013 Appendix H to Chapter 6.
- For buildings outside California, the methodology follows the modifications as outlined in "Seismic Risk Assessment of VA Hospital Buildings Risk Assessment Methods Phase 1 Report" prepared by the National Institute of Building Sciences dated April 13, 2010.
- Adjustments have been made to capture multi-story wood frame buildings with severe weak story deficiencies.

The tool outputs Seismic Risk Rating for each building based on the probability of collapse (POC) values determined from the HAZUZ AEBM methodology mentioned above. The POC values are calculated based on the following key parameters:

- Structural capacity of each building: The structural capacity is derived from the seismic design coefficient (base shear C<sub>s</sub>) determined for each building based on the lateral force resisting system (Model Building Type), size, location and the age of the building.
- Seismic Hazard: BSE-2E seismic hazard level at each site determined based on ASCE 41-13, "Seismic Evaluation and Retrofit of Existing Buildings" was used. BSE-2E is taken as a seismic hazard with 5 % probability of exceedance in 50 years at a site.
- Significant Structural Deficiencies that influence building capacity and building response (degradation, maximum drift, modal shape factor, complete structural damage fragilities, and the collapse factor.)





Buildings in California were separated from other states since we have a better knowledge of code requirement for California buildings (via Uniform Building Code) between 1941 and 1975.

A user manual for the Seismic Risk Rating (SRR) calculator along with a glossary of key terminology has been provided in the following pages. For the HAZUS AEBM Parameters used by the SRR calculator, please refer to Attachments 1 & 2.

Refer to the enclosed database of Seismic Risk Ratings and the associated ranking for the inventory. The relative seismic risk ranking is primarily defined by the Seismic Risk Rating (SRR) values as shown below.

	Rankings	s of Seismic Risk Rating (SRR)						
EHR	12% < SRR	Buildings of Exceptionally High Risk recommended as						
EHK	12/0 \ SKK	highest priority for mitigation of risk						
HR	2% < SRR <12%	Buildings of <u>High Risk</u> recommended as a high priority for						
пк	270 \ SKK \1270	mitigation of risk						
LP	SRR < 2%	Buildings not meeting the RP8 Seismic Standards, but of						
LI	SRR < 2%	<u>Low Priority</u> for mitigation of risk compared to the others						
	Retrofitted buildings or buildings	ldings meeting structural life-safety criteria as determined by						
NR	an evaluation report are No	t Rated. These buildings may not fully comply with the latest						
INK.	requirements of RP8 Seismic Standards including the nonstructural life-safety							
requirements.								

#### Seismic Risk Rating and Ranking Notes:

- 1) All buildings in LP/HP/EHR rankings fail the National Standard for seismic evaluation (RP8). A "LP" ranking does not mean that the building meets Life Safety per RP-8 or ASCE 41-13. It simply means that it has a lower priority than the others.
- 2) The dividing line between EHR/HR and LP ranking has been set for purpose of this methodology to be consistent with rankings used by other agencies (e.g. State of California DGS, OSHPD, University of California, and Stanford University) as having high risk to life safety.
- 3) The dividing line between EHR and HR rankings has been set for purpose of this methodology to identify buildings of known high collapse potential such as Unreinforced Masonry Bearing Walls (URM) and Non-ductile Concrete Frames (C1) in high seismic regions.
- 4) The Seismic Risk Rating Tool is best used for comparison of relative risk of many buildings, rather than evaluation of individual buildings. The SRR is not calibrated to performance objectives of ASCE 41 or other rating systems.
- 5) The SRR is not intended to define acceptance to RP8 performance criteria.
- 6) The SRR does not consider the seismic hazard associated with nonstructural components.





- 7) The SRR Tool does not consider the impact of Geological Site Hazards (such as Liquefaction, Slope Stability, and Surface Fault Rupture).
- 8) Extraction of data from evaluation reports:
  - For calculation of SRR values, building data was extracted from seismic evaluation reports and to limited extent from calculations (where available).
  - Structural drawings were not reviewed as the intent of this Report was to develop ratings quickly, and not to engage in re-evaluation of the buildings.
  - It is important to note that the extraction of seismic deficiencies from an existing report requires engineering judgment, since not all reports provide seismic deficiencies in a consistent (ASCE-31) format. Answers to some of the critical deficiency statements were not directly provided in the report (e.g. the buildings evaluated to 80% UBC).
  - Building strength was primarily taken from default values from HAZUS AEBM (modified per OSHPD methodology). Refinement was made by extracting the actual strength from the evaluation reports when available (which yielded better results).

As part of this Report, the earthquake performance rating for 10 selected buildings was determined using the procedures of the United States Resiliency Council's (USRC) rating system. A summary of ratings has been provided herein. For detailed back-up information for USRC ratings, please refer to Attachment 3.





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Attachment 1: HAZUS AEBM Parameters for California

Attachment 2: HAZUS AEBM Parameters for States other than California

Attachment 3: USRC Rating – ASCE 31 Evaluation Statements





## SEISMIC RISK RATING – SUMMARY DATABASE



## **DATABASE SUMMARY**









## SEISMIC RISK RATING -EXPANDED DATABASE





	BUILDING LOCATION INFORMATION		BUILDING I	DATA	CRITERIA / DATA		SITE SEISMIC	CITY DATA	RESULTS
0	0		oove ground (ft)	s above ground below ground g Type	teria vel (T1, T2 or T3)	n Level		Kappa Index Ind S1	Rating (SRR) onally High Risk; v;NR=Not Rated)
Region Location_Cod	ilding_Nam	Building_GSF	esign Year dg Height ak	of Stories of Stories del Buildin	Evaluation Criteria	BC Zones eismic Design	E2E-Sxs	TL Seismicity for Based on Ss a	RR Category FHR= Exception FHRHR Exception FLOW Priority
<mark>ቆ                                    </mark>	JOHN A CAMPBELL USCT MOBILE AL	<u>중</u> 115014	1932 70	NON	ASCE 31 T1	Seisi	0.079 0.07	<mark>구 ග ග</mark> 12 Low	では、 Remarks
4 GA007		127372	1898 71.5	4 (5)	FEMA 310 T2	2A	0.338 0.192	8 Moderate	
4 GA011 4 GA011		96116	1974 46 1974 32.5	3 0 2 0	ASCE 31 T2-LDP ASCE 31 T2-LDP	2A 2A	0.306	12 Moderate	
4 KY008		469769	1969	10 1	FEMA 310 T2-LDP	1 1	0.179 0.132	<ul><li>12 Moderate</li><li>12 Moderate</li></ul>	
4 SC001	J. BRATTON DAVIS US BKRPCY COLUMB SC	58135	1936 71	5 1	ASCE 31 T1	2A	0.448 0.231	8 Moderate	
4 TN008		444745 629469	1963 192 1974 100	14 1	ASCE 41 T3-LDP FEMA 310 T2-LDP	3 2A	0.877 0.455 0.134 0.106		
8 CO000		270106	1916 86	4 2	FEMA 310 T1	1	0.134 0.100		(b) (5)
8 CO003	9 BYRON G.ROGERS - COURTHO DENVER CO	778043	1965 93	5	FEMA 310 T2	1	0.138 0.067	4 Low	(5) (5)
8 CO003 8 MT000		72938	1965 1904 66.67	18 4 1	FEMA 310 T2 ATC 14/UBC 1991/GS/	1 \ <b>S</b> 3	0.138		
8 MT001		144681	1913	3 1	FEMA 310 T1	3	0.516 0.241		
	B BILLINGS BILLINGS MT	F2004	1965 82	5 1	FEMA 310 T1	1	0.099 0.063		
8 UT001	D FOREST SERVICE BLDG OGDEN UT FRANK E MOSS COURTHOUSE SALT LAYUT	53221 234288	1933 63 1932	4 1	ATC 14/UBC 1991/GS/ FEMA 310 (ii T1	3	1.009 0.531 1.12 0.597		
8 UT003	JAMES V HANSEN FEDERAL BL OGDEN UT	206344	1965	6 1	FEMA 310 T1	3	1.01 0.531	8 High	
8 UT003		6346 10162	1971 1967 13	1 0	ASCE 31 T2-deficie	nc)3 2B	0.887 0.457 0.516 0.245		
8 UT004:		57610	1932	3 1	ASCE 31 T2-LDP	1	0.279 0.115		·
8 WY002	9 JOSEPH C O'MAHONEY FED CE CHEYEN WY	207835	1964 131	8 1	FEMA 310 T1	1	0.165 0.09	4 Low	
8 WY003	0 DICK CHENEY FB- FED OFFICE CASPER WY 0 DICK CHENEY FB - POST OFFIC CASPER WY	155948	1970 1970	5	FEMA 310 T1 FEMA 310 T1	1	0.279 0.115 0.279 0.115		
9 CA004		885285		18	FEMA 356 T2	4	1.812 0.625		·
9 CA009	1 APPRAISERS BLDG SAN FRA CA	497668	1944	16	ASCE 41-06 T3 by R+0	4	1.467 0.887	12 Very high	
9 CA014		71534 362190	1955 26 1961 124	2 1 8 0	FEMA 178, AT3 - NSP	3	1.766 0.793 0.656 0.402		
9 CA015		1427966		8 0 20 2	FEMA 356 T3 - NSP 80 % UBC 1988	4	0.656 0.402 1.5 0.935		·
9 CA016	7 EDWARD J. SCHWARTZ - US C(SAN DIE(CA	895247	1976 100	5 2	ASCE 31 T2	4	0.979 0.55	8 High	
9 CA016		13200	1976 90 1975 14	6 2 1 0	ASCE 31 T2 1991 UBC T2	4	0.979 0.55 2.176 1.108	<ul><li>8 High</li><li>8 Very high</li></ul>	
9 CA019	SOCIAL SECURITY BUILDING HUNTING CA	23538	1969 14	1 0	80 % UBC& T2- static	4	1.413 0.738	8 Very high	·
	3 JAMES C. CORMAN FED BLDG VAN NUY CA	230890	1974 59	4 1	80 % 1994 U T3- NSP	4	1.622 0.83		
	9 FEDERAL BUILDING - BLDG A SACRAM CA 9 FEDERAL BUILDING - BLDG B SACRAM CA	315407	1967 27 1967 27	2 0 2	UBC 1988 UBC 1988	3	0.586 0.384 0.586 0.384		
9 CA019	FEDERAL BUILDING - BLDG C SACRAM CA		1967 27	2 0	UBC 1988	3	0.586 0.384	12 Moderately High	
	D FEDERAL BUILDING - BLDG D SACRAM CA D FEDERAL BUILDING SANTA A CA	280364	1967 14 1975 130	1 0	UBC 1988 80% UBC 19 T2 level	3 4	0.586		
	1 JOHN F SHEA FED BLDG- FED ESANTA R CA	77834	1975 130	3 1	FEMA 356 T2- static		2.193 1.334	8 Very high	
9 CA022	1 JOHN F SHEA FED BLDG- COUFSANTA R CA		1975 19	1	FEMA 356 T2- static	4	2.193 1.334	8 Very high	
	4Z Hawthorne Federal Building Lawndale CA 5 LEO J. RYAN FEDERAL RECOR SAN BRUCA	216760 233986	1970 1972	6	assume AS(T3 -pusho earthquake damage re		1.192 0.656 2.127 1.427		
9 CA026	ROBERT F. PECKHAM - COURT SAN JOS CA	269337	1982 66	5 1	FEMA 310 & T3- NSP	4	1.5 0.825	12 Very high	
9 CA026	ROBERT F. PECKHAM- OFFICE SAN JOS CA		1982 40	3	FEMA 310 & T3- NSP	4	1.5 0.825		
9 CA026	) ROBERT F. PECKHAM-ROOF CASAN JOS CA		1982	1	FEMA 310	4	1.5 0.825	12 Very high	
9 CA026	7 MAIN BUILDING SAN DIE CA	45947	1985 13	1 0	FEMA 310 T2	4	0.794 0.436	8 Moderately High	
	B SECONDARY INSP BLDG SAN DIECCA D PASEO INT'L - OTAY MESA SAN DIECCA	53095 71714	1985 1985 15	1	FEMA 310 T2 FEMA 310 T2	4	0.794 0.436 0.794 0.436		
9 CA028		1296874		22 3	FEMA 273+ T3- NSP	4	1.795 0.804		
9 CA030	ROBERT E. COYLE FEDERAL C FRESNO CA	495914	2005 80	6 1	building is retrofitted, th		0.633 0.374	12 Moderately High	
9 CA052		1054223	1971 119	7	ASCE 31 was skipped ASCE 31 was skipped		0.998 0.365		
	1 CHET HOLIFIELD - STR 1 &3 LAGUNA CA 1 CHET HOLIFIELD - STR 2 LAGUNA CA		1971 20 1971 20	1 1 pa 1 pa	ASCE 31 was skipped ASCE 31 was skipped	and4 and4	0.998 0.365 0.998 0.365		
9 CA052	1 CHET HOLIFIELD - STR 4 & 5 LAGUNA CA		1971	3	ASCE 31 was skipped		0.998 0.365	8 High	
9 CA052	1 CHET HOLIFIELD - STR 6 & 7 LAGUNA CA		1971 37.5	2	ASCE 31 was skipped	and4	0.998 0.365	8 High	
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Region	catio		Building	193	oad Pa	ass Irreg.	ert. Disco	dj. Build.	ptive	eter. M	eter. S	eter. Conc	eak C	ak O	all Anch.	edun.	eak Story	oft Story	ors. Irr	efl. Incomp	iaph. Open	op. Slab	eldd	RM Wall	RM Pa	ear F
Re				은 (5) (5)	ő	æ	ā	ם	Ø	Ö	Ö	Ö	Φ	Ф	a	Ō	Φ	ō	ō	Ō	<u>:</u>	ō	Ē	œ	œ	Ě
4	GA00		JOHN A CAMPBELL USCT TOMOCHICHI FB-CH	(b) (5)																						
4	GA0		FB-PO-CT - EAST BUILDING																							
4	GA01	118 I	FB-PO-CT - WEST BUILDING																							
4	SC00		ROMANO MAZZOLI FB J. BRATTON DAVIS US BKRPC																							
4	TNO		CLIFFORD DAVIS-ODELL HOR																							
5	IN013	33	MINTON-CAPEHART F/B																							
8	COO		BYRON WHITE US CRTHS																							
8	COO		BYRON G.ROGERS - COURTH BYRON G.ROGERS - OFFICE																							
8	MTO		MIKE MANSFIELD FB / CH																							
8	MT00		FB-PO-CT																							
8	MT00	-	BILLINGS FOREST SERVICE BLDG																							
8	UTO	017 I	FRANK E MOSS COURTHOUS																							
8	UT00		JAMES V HANSEN FEDERAL B																							
8	UTOC	-	RS BUILDING FB																							
8	WY0		EWING T. KERR FB-CT																							
8	WY0	029 .	JOSEPH C O'MAHONEY FED C																							
8	WY0		DICK CHENEY FB- FED OFFIC DICK CHENEY FB - POST OFFI																							
9	CAO		US COURT HOUSE																							
9	CA00	091	APPRAISERS BLDG																							
9	CA01		FEDERAL BUILDING																							
9	CA01		JOHN E. MOSS FEDERAL BUIL PHILLIP BURTON,FB CT																							
9	CA01	167 E	EDWARD J. SCHWARTZ - US C																							
9	CA01	167 E	EDWARD J. SCHWARTZ - FED																							
9	CA01		SOCIAL SECURITY BLDG SOCIAL SECURITY BUILDING																							
9			JAMES C. CORMAN FED BLDG																							
9			FEDERAL BUILDING - BLDG A																							
9	CA01	-	FEDERAL BUILDING - BLDG B FEDERAL BUILDING - BLDG C																							
9			FEDERAL BUILDING - BLDG D																							
9	CA02	_	FEDERAL BUILDING																							
9	CA02	_	JOHN F SHEA FED BLDG- FED JOHN F SHEA FED BLDG- COU																							
9			Hawthorne Federal Building																							
9	CA02		LEO J. RYAN FEDERAL RECO																							
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9	CA02	_	ROBERT F. PECKHAM-ROOF C																							
9	CA02		MAIN BUILDING SECONDARY INSP BLDG																							
9	CA02	269 I	PASEO INT'L - OTAY MESA																							
9	CA02		EDWARD R ROYBAL FB & CH																							
9	CA03	-	ROBERT E. COYLE FEDERAL CHET HOLIFIELD - TOWER ST																							
9	CAUS		CHET HOLIFIELD - TOWER ST																							
9	CA05	521 (	CHET HOLIFIELD - STR 2																							
9	CA05		CHET HOLIFIELD - STR 4 & 5 CHET HOLIFIELD - STR 6 & 7																							
9	CAUC	UZI (	OHET HOLIFIELD - STK 6 & /																							
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		BUILDING LOCATION INF	ORMATION		BUI	LDING D	ATA		CRITERIA / DA	ATA	S	ITE S	EISMI	CITY DATA	RESULTS
Region		Building_Name	City State	Building_GSF	Design Year	Bldg	No. of Stories above ground No. of Stories below ground	<u> </u>	Evaluation Criteria  Evaluation Level (T1, T2 or T3)		UBC Zones Seismic Design Level	BSE2E-Sxs	BSE2E-S×1	TL Seismicity for Kappa Index Based on Ss and S1	Seismic Risk Rating (SRR) SRR Category (EHR= Exceptionally High Risk; HR=High Risk; LP=Low Priority;NR=Not Rated) w w w y
			LAGUNA CA WINTERI CA	7001	1971 1958	17.5	1	(b) (J)	ASCE 31 was skipp FEMA 310 T2	ped and 4	_	0.998 0.746	0.365 0.426	8 High 8 Moderately High	(b) (5)
			WINTERI CA	7001	1958		1		FEMA 310 T2	4	_	0.746	0.426	8 Moderately High	
		C. CLIFTON YOUNG FOB & CTH		126891	1965	67	5		FEMA 310-F T2	4	4	1.309	0.599	6 Very high	
		FOLEY FOB & COURTHOUSE FEDERAL BUILDING	LAS VEG NV CARSON NV	209205 51338	1967 1970	70 40	4 1		FEMA 178- 8 T2 lev 80 % UBC 1994	evel 2	2B LC	0.387 1.429	0.189 0.628	6 Moderate 6 Very high	
		FEDERAL BUILDING - POST OF		01000	1970	40	1		80 % UBC 1994	4	4	1.429	0.628	6 Very high	
	_		CARSON NV		1975		1		80 % UBC 1994	4	4 LC	1.429	0.628	6 Very high	
			JUNEAU AK	343635		174.5	11 1		FEMA 310 T2-LS	SP 3	3		0.487		
		FEDERAL BUILDING- NORTH BL FEDERAL BUILDING- EAST BLD		200615	1977 1977		3 1- <sub>1</sub> 3 1		80 % UBC 1994 80 % UBC 1994	9	3	0.795 0.795	0.408	6 Moderately High 6 Moderately High	
		FEDERAL BUILDING- GARAGE	FAIRBAN AK		1977		4 0		80 % UBC 1994	3	3			6 Moderately High	
	K0029	FEDERAL BUILDING- MP BLDG	FAIRBAN AK		1977		1 0		80 % UBC 1994	3		0.795	0.408	6 Moderately High	
			ANCHOR AK	652051	1976 1976	86.92 26.75	6 1		FEMA 310 T2 FEMA 310 T2	4	4	1.172 1.172	1.418 1.418	16 Very high 16 Very high	
			ANCHOR AK		1976	65.4	5 1		FEMA 310 T2	4	4	1.172		16 Very high 16 Very high	
			ANCHOR AK		1979		1		FEMA 310 T2	4	4	1.172	1.418	16 Very high	
		STATION BUILDING	TOK AK	7011	1971		2 1		FEMA 310 T2	3		0.217	0.154		
		SERVICE BUILDING SERVICE BUILDING- QUARTERS	TOK AK	7511	1971 1971		1 1		FEMA 310 T1 FEMA 310 T1	3		0.217 0.217	0.154 0.154	<ul><li>12 Moderately High</li><li>12 Moderately High</li></ul>	
		SERVICE BUILDING -REC BLDG			1971		1 1		FEMA 310 T1	3		0.217	0.154	12 Moderately High	
		SERVICE BUILDING- POLE BLD			1971		1		FEMA 310 T1	3		0.217	0.154	12 Moderately High	
		SERVICE BUILDING -MOBILE UN		074440	1971	00	1 2 /		FEMA 310 T1	3		0.217	0.154	12 Moderately High	
		JAMES A MCCLURE FED BLDG/ J A REDDEN US CTHS	BOISE ID MEDFOR OR	274412 33804	1966 1916	98	7 2 (		FEMA 310 T2 FEMA 178	3		0.258 0.515	0.127 0.355	6 Moderate 16 Moderately High	_
		GUS J. SOLOMON CTHSE	PORTLATOR	205338	1933		8 1		FEMA 310 T2-LD	DP 3		0.878	0.548	16 High	
		911 FEDERAL BLDG	PORTLATOR	312447		94	8 1		FEMA 310 + T2- LI			0.877	0.545	16 High	
		911 FEDERAL BLDG - AUDITOR		50500	1953		2 0		FEMA 310 + T2-LD			0.877	0.545	16 High	
		DAVID J. WHEELER FB EUGENE FED BLDG - COURTHO	BAKER OR	58599 111697	1969 1974	44	2		FEMA 310 T2 FEMA 310 T2	2	2B	0.375 0.549	0.203 0.289	16 Moderate 16 High	_
			EUGENE OR	111037	1974		4		FEMA 310 T2	3	3	0.549	0.289	16 High	
		BPA BUILDING	PORTLATOR	701184	1987	129	8 4		FEMA 356 at T2	3	3	0.877	0.545	16 High	
		RICHARD B. ANDERSON FEDER FED BLDG U S POST OF	PORT AN WA SPOKAN WA	22569 160292		26.5 70	2 <u>1</u> 4 1		FEMA 310 T2 80% UBC 1991	3			0.609 0.136	16 Very high 16 Moderate	
			YAKIMA WA	58282	1904	57	4 1 3 1 (		80% UBC 1991 80% UBC 1994				0.136	16 Moderately High	
10 W	A0059	FED ARCH & REC CTR-NORTH	SEATTLEWA	187752	1946		1		80 % UBC 1994	3		0.946	0.515	6 High	
		FED ARCH & REC CTR- CENTRA			1984		1		80 % UBC 1994	3		0.946	0.515	6 High	
		FED ARCH & REC CTR - SOUTH FED BLDG USPO & CH - FED BL		386561	1984 1965	96	7 1		80 % UBC 1994 ASCE 31 T2-de			0.946 0.43	0.515 0.258	6 High 16 Moderate	
		FED BLDG USPO & CH - FED BL		300301	1965	19	1 0		ASCE 31 T2-de			0.43		16 Moderate	
	A0063	FED BLDG USPO & CH- COURT	RICHLAN WA		1965	46	3 1-		ASCE 31 T2-de	eficie <mark>nc</mark> 2	2B	0.43	0.258	16 Moderate	
		THOMAS S. FOLEY US COURTH		301915 11847	1967	124	9 2		ASCE 31 T2				0.192		
			BLAINE WA WENATOWA	11847	1966 1973	12 64	4		FEMA 310 T2 FEMA-310 T2			0.829 0.505		<ul><li>16 Moderately High</li><li>16 Moderately High</li></ul>	
				13.714										-	
			BOTHELLWA	61266	1988		2		ASCE 31 T2-de				0.606	6 High	
		ADMINISTRATION BLDG FED CTR SO OFF- SHOWROOM	AUBURN WA	105771 424343		25 36.375	2		FEMA 310 T1 an ASCE 31-03/T1 an		_		0.595 0.971	6 High 6 High	
		FED CTR SO OFF - SHOWROOM		424343		37.71	2		ASCE 31-03/T1 an				0.971	6 High	
10 W	A0953	FED CTR SO OFF- CRANE RUN	SEATTLEWA		1932	36	1		ASCE 31-03/T1 an	nd T2	3	0.929	0.971	6 High	
		FED CTR SO OFF- WHARF OF (		0500	1932	40	1 .		ASCE 31-03/T1 an	nd T2			0.971	6 High	
		FED CTR S BIA OFFICE TACOMA UNION STATION - UNI	SEATTLE WA	9599		40 61	1 1		ASCE 31-03 T1 FEMA 310 T2	3			0.971 0.525	6 High 6 High	
		TACOMA UNION STATION - COL		Ů	_	41	3		T3- N	NSP 3	_	0.957	0.525	6 High	
		TACOMA UNION STATION - SEC				41	3		T2- L				0.525	6 High	
													6		
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3/31/2016





		BUILDING LOCATION IN	f									S	STRUCT	URAL D	EFICIE	NCIES									
Region Location_Code		Building_Name	Pre 1933	oad Path	Mass Irreg.	Vert. Discont.	Adj. Build.	Captive Col.	Deter. Wood	Deter. Steel	Deter. Conc.	Weak Col (conc)	Weak Col (Steel)	Wall Anch.	Redun.	Weak Story	Soft Story	Tors. Irreg.	Deff. Incomp.	Diaph. Open	Top. Slab	Cripple Walls	URM Wall h/t	URM Parap	Shear Failure C1 building only
9 CA06 9 CA06 9 NV00 9 NV00 9 NV00 10 AK00	1521	CHET HOLIFIELD - STR 8 BS MAIN BLDG BS CUSTOM AND RES. BLDG C. CLIFTON YOUNG FOB & CTH FOLEY FOB & COURTHOUSE FEDERAL BUILDING FEDERAL BUILDING - POST OF FEDERAL BUILDING - POST OF FEDERAL BUILDING- GARAGE FED BLDG, CRTH, AND USPO FEDERAL BUILDING- NORTH BL FEDERAL BUILDING- GARAGE FED BLDG, USCT- MAIN BLDG FEDERAL BUILDING- GARAGE FED BLDG, USCT- MODULE F FED BLDG OVER FED BLDG SERVICE BUILDING - POLE BLD SERV	(b) (5)				<del>V</del>											i i			Lieu Communication of the Comm				

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#### MANUAL FOR SEISMIC RISK RATING CALCULATOR

The macros should be enabled.

#### DESCRIPTION OF INPUT PARAMETERS FOR SEISMIC RISK RATING CALCULATOR:

Yellow Cells are input required for the Seismic Risk Rating calculations to run and they are as follows:

**BSE2E-** S<sub>XS</sub>: From USGS website

http://earthquake.usgs.gov/designmaps/us/application.php Select Design Code Reference Document: 2013 ASCE 41

Earthquake Hazard Level: BSE-2E

 $BSE2E-S_{X1}$ : From USGS website

http://earthquake.usgs.gov/designmaps/us/application.php Select Design Code Reference Document: 2013 ASCE 41

Earthquake Hazard Level: BSE-2E

**Long Period Transition Period T<sub>L</sub>:** From USGS website

http://earthquake.usgs.gov/designmaps/us/application.php

Select Design Code Reference Document: 2010 ASCE 7 (w/March 2013 errata)

 $T_L$  is included in the detailed report

**Seismicity:** Choose from drop-down list (Low, Moderate, Moderately High, High or Very High) Determined from following table. (Table 5-1 of FEMA P-155)

Table 5-1 Range and Median MCE<sub>R</sub> Spectral Response Acceleration Values in Each Seismicity Region

		Range of Response V	Median Response Values for Each Region			
Se	eismicity Region	$S_{s}(\mathbf{g})$	$S_{1}(\mathbf{g})$	$S_{S,avg}$ (g)	$S_{1,avg}(g)$	
	Low (L)	$S_{\rm S} < 0.250$ g	$S_{7} < 0.100g$	0.20	0.08	
	Moderate (M)	$0.250g \le S_S < 0.500g$	$0.100g \le S_1 < 0.200g$	0.40	0.16	
	Moderately High (MH)	$0.500g \le S_S < 1.000g$	$0.200g \le S_1 < 0.400g$	0.80	0.32	
	High (H)	$1.000g \le S_S < 1.500g$	$0.400g \le S_1 < 0.600g$	1.20	0.48	
	Very High (VH)	$S_s \ge 1.500g$	$S_7 \ge 0.600g$	2.25	0.90	

 $S_s$  and  $S_1$  are determined from USGS website:

http://earthquake.usgs.gov/designmaps/us/application.php

Select Design Code Reference Document: 2010 ASCE 7 (w/March 2013 errata)

Select Risk Category: I or II or III





Number of stories above ground: Do not include small penthouses.

**Design Year:** Provide year only. For Building in CA, year of the California Building Code (CBC/UBC) used for the original building design; for pre-1933 buildings and for non west coast buildings, the design year shall be reported.

**State:** State, the building is located in.

**UBC Seismic Zone:** Based on the location of the building, determine the UBC Zone from UBC 94. Refer to Figure-1.

**Model Building Type**: Choose from the drop-down list. Refer to Table-1.

**Deficiencies:** Refer to Table-2. "TRUE" means deficiency exists. "FALSE" means deficiency does not exist.

#### **Important Note:**

- For C1 buildings with shear failure deficiency, weak story irregularity and deflection incompatibility deficiencies shall be "TRUE".
- For S1 buildings, that are Pre-Northridge, it should be considered to include soft story irregularity deficiency as "TRUE".

#### Green Columns are optional input as such:

**Building height above ground:** If this number is input,  $H_r$  in equation A6-.6 of Appendix H to Chapter 6 of 2013 California Building Code is overwritten.

 $C_s$ : If the number is input,  $C_s$  in equation A6-2 of Appendix H to Chapter 6 of 2013 California Building Code is overwritten.

 $T_e$ : If the number is input,  $T_e$  in equation A6-3 of Appendix H to Chapter 6 of 2013 California Building Code is overwritten.

**Seismic Design Level:** The user can overwrite the Seismic Design Level for outside of California buildings. If the input is zero, the program uses seismic design levels per Table 2.2 of HAZUS AEBM Technical and User's Manual for outside of California Building.

#### HOW TO OBTAIN THE SEISMIC RISK RATING:

Once the input is completed, the user should go to 'intersectionpoint' tab and click the "RUN" button.





	INPUT					
	Cs	Te	$\alpha_1$	$\alpha_2$	Gamma (γ)	La
	0.067	0.57	0.75	0.75	1.88	
<u> </u>						
	INTERME	DIATE OU	ITPUT			
	A <sub>y</sub>	D <sub>y</sub>	Au	Du	βe	
	0.168	0.535	0.196	2.546	7	
"RUN' BUTTON	OUTPUT					
	S <sub>d</sub>	Sa				
	0.224	0.070				

Seismic Risk Rating is displayed in the "RESULTS" Table 'BIF' tab.

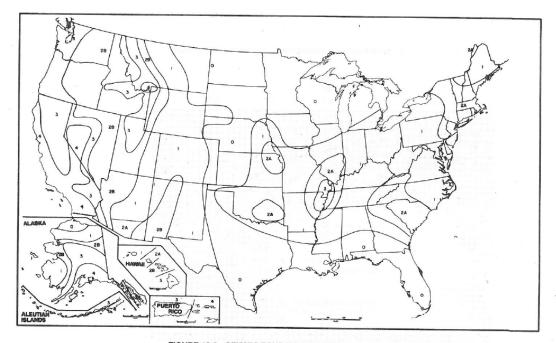


FIGURE 16-2—SEISMIC ZONE MAP OF THE UNITED STATES
For areas outside of the United States, see Appendix Chapter 16.

**FIGURE-1: SEISMIC ZONE MAP** 

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TABLE-	TABLE-1: MODEL BUILDING TYPE (FROM ASCE 41-13 TABLE 3-1)									
W1 Wood Light Frames	These buildings are single- or multiple-family dwellings one or more stories high. Building loads are light, and the framing spans are short. Floor and roof framing consists of wood joists or rafters on wood studs spaced no more than 24 in. apart. The first-floor framing is supported directly on the foundation system or is raised up on cripple studs and post-and-beam supports. The foundation may consist of a variety of elements. Chimneys, where present, consist of solid brick masonry, masonry veneer, or wood frame with internal metal flues. Seismic forces are resisted by wood frame diaphragms and shear walls. Floor and roof diaphragms consist of straight or diagonal lumber sheathing, tongue-and-groove planks, oriented strand board, or plywood. Shear walls consist of straight or lumber sheathing, plank siding, oriented strand board, plywood, stucco, gypsum board, particle board, or fiberboard. Interior partitions are sheathed with plaster or gypsum board.									
W2 Wood Frames, Commercial and Industrial	These buildings are commercial or industrial buildings with a floor area of 5,000 ft <sup>2</sup> or more. There are few, if any, interior walls. The floor and roof framing consists of wood or steel trusses, glulam or steel beams, and wood posts or steel columns. The foundation system may consist of a variety of elements. Seismic forces are resisted by wood diaphragms and exterior stud walls sheathed with plywood, oriented strand board, stucco, plaster, or straight or diagonal wood sheathing, or they may be braced with rod bracing. Wall openings for storefronts and garages, where present, are framed by post-and-beam framing.									
S1 (with Stiff Diaphragms)	These buildings consist of a frame assembly of steel beams and steel columns. Floor and roof framing consists of cast-in-place concrete slabs or metal deck with concrete fill supported on steel beams, open web joists, or steel trusses. Seismic forces are resisted by steel moment frames that develop their stiffness through rigid or semi-rigid beam—column connections. Where all connections are moment-resisting connections, the entire frame participates in seismic force resistance. Where only selected connections are moment-resisting connections, resistance is provided along discrete frame lines. Columns are oriented so that each principal direction of the building has columns resisting forces in strong axis bending. Diaphragms consist of concrete or metal deck with concrete fill and are stiff relative to the frames. Where the exterior of the structure is concealed, walls consist of metal panel curtain walls, glazing, brick masonry, or precast concrete panels. Where the interior of the structure is finished, frames are concealed by ceilings, partition walls, and architectural column furring. The foundation system may consist of a variety of elements.									
S1A Steel Moment Frames (with Flexible Diaphragms)	These buildings are similar to S1 buildings, except that diaphragms consist of wood framing; untopped metal deck; or metal deck with lightweight insulating concrete, poured gypsum, or similar nonstructural topping, and are flexible relative to the frames									
S2 Steel Braced Frames (with Stiff Diaphragms)	These buildings have a frame of steel columns, beams, and braces. Braced frames develop resistance to seismic forces by the bracing action of the diagonal members. The braces induce forces in the associated beams and columns such that all elements work together in a manner similar to a truss; all element stresses are primarily axial. Diaphragms transfer seismic loads to braced frames. The diaphragms consist of concrete or metal deck with concrete fill and are stiff relative to the frames. The foundation system may consist of a variety of elements. Three variations in the configuration and design of braced frames exist. These variations are									





TABLE-	1: MODEL BUILDING TYPE (FROM ASCE 41-13 TABLE 3-1)
	<ul> <li>Concentrically braced frames: Component work lines intersect at a single point or at multiple points such that the distance between intersecting work lines (or eccentricity) is less than or equal to the width of the smallest component connected at the joint.</li> <li>Eccentrically braced frames: Component work lines do not intersect at a single point, and the distance between the intersecting work lines (or eccentricity) exceeds the width of the smallest component connecting at the joint. Some of the members are subjected to shear and flexural stresses because of that eccentricity.</li> <li>Buckling restrained braced frames: Special types of concentrically braced frames where the steel bracing members are encased within a rigid casing that is intended to prevent buckling of the steel brace.</li> </ul>
S2A Steel Braced Frames (with Flexible Diaphragms)	These buildings are similar to S2 buildings, except that diaphragms consist of wood framing; untopped metal deck; or metal deck with lightweight insulating concrete, poured gypsum, or similar nonstructural topping, and are flexible relative to the frames
S3 Steel Light Frames	These buildings are pre-engineered and prefabricated with transverse rigid steel frames. They are one-story high. The roof and walls consist of lightweight metal, fiberglass, or cementitious panels. The frames are designed for maximum efficiency, and the beams and columns consist of tapered, built-up sections with thin plates. The frames are built-in segments assembled in the field with bolted or welded joints. Seismic forces in the transverse direction are resisted by the rigid frames. Seismic forces in the longitudinal direction are resisted by wall panel shear elements or rod bracing. Diaphragm forces are resisted by untopped metal deck, roof panel shear elements, or a system of tension-only rod bracing. The foundation system may consist of a variety of elements
S4 Dual Frame Systems with Backup Steel Moment Frames and Stiff Diaphragms	These buildings consist of a frame assembly of steel beams and steel columns. The floor and roof diaphragms consist of cast-in-place concrete slabs or metal deck with or without concrete fill. Framing consists of steel beams, open web joists, or steel trusses. Seismic forces are resisted primarily by either steel braced frames or cast-in-place concrete shear walls in combination with backup steel moment frames. These walls are bearing walls where the steel frame does not provide a complete vertical support system. The steel moment frames are designed to work together with the steel braced frames or concrete shear walls in proportion to their relative rigidity. The steel moment frames provide a secondary seismic-force- resisting system based on the stiffness of the frame and the moment capacity of the beam—column connections. The moment frames are typically capable of resisting 25% of the building 's seismic forces. The foundation system may consist of a variety of elements.
S5 Steel Frames with Infill Masonry Shear Walls (with Stiff Diaphragms)	This is an older type of building construction that consists of a frame assembly of steel beams and steel columns. The floor and roof diaphragms consist of cast-in-place concrete slabs or metal deck with concrete fill and are stiff relative to the walls. Framing consists of steel beams, open web joists, or steel trusses. Walls consist of infill panels constructed of solid clay brick, concrete block, or hollow clay tile masonry. Infill walls may completely encase the frame members and present a smooth masonry exterior with no indication of the frame. The seismic performance of this type of construction depends on the interaction between the frame and infill panels. The combined behavior is more like a shear wall structure than a frame structure. Solidly infilled masonry panels form diagonal compression struts between the intersections of the frame members. If the walls are offset from the frame and do not fully engage the frame members, diagonal





TABLE-	1: MODEL BUILDING TYPE (FROM ASCE 41-13 TABLE 3-1)
	compression struts do not develop. The strength of the infill panel is limited by the shear capacity of the masonry bed joint or the compression capacity of the strut. The post-cracking strength is determined by an analysis of a moment frame that is partially restrained by the cracked infill. The foundation system may consist of a variety of elements.
S5A Steel Frames with Infill Masonry Shear Walls (with Flexible Diaphragms)	These buildings are similar to S5 buildings, except that diaphragms consist of wood sheathing or untopped metal deck, or have large aspect ratios and are flexible relative to the walls.
C1 Concrete Moment Frames	These buildings consist of a frame assembly of cast-in-place concrete beams and columns. Floor and roof framing consists of cast-in-place concrete slabs, concrete beams, one-way joists, two-way waffle joists, or flat slabs. Seismic forces are resisted by concrete moment frames that develop their stiffness through monolithic beam—column connections. In older construction, or in levels of low seismicity, the moment frames may consist of the column strips of two-way flat slab systems. Modern frames in levels of high seismicity have joint reinforcing, closely spaced ties, and special detailing to provide ductile performance. This detailing is not present in older construction. The foundation system may consist of a variety of elements.
C2 Concrete Shear Walls (with Stiff Diaphragms)	These buildings have floor and roof framing that consists of cast-in-place concrete slabs, concrete beams, one-way joists, two-way waffle joists, or flat slabs. Buildings may also have steel beams, columns, and concrete slabs for the gravity framing. Floors are supported on concrete columns or bearing walls. Seismic forces are resisted by cast-in-place concrete shear walls. In older construction, shear walls are lightly reinforced but often extend throughout the building. In more recent construction, shear walls occur in isolated locations, are more heavily reinforced, and have concrete slabs that are stiff relative to the walls. The foundation system may consist of a variety of elements.
C2A Concrete Shear Walls (with Flexible Diaphragms)	These buildings are similar to C2 buildings, except that diaphragms consist of wood sheathing, or have large aspect ratios, and are flexible relative to the walls.
C3 Concrete Frames with Infill Masonry Shear Walls (with Stiff Diaphragms)	This is an older type of building construction that consists of a frame assembly of cast-in-place concrete beams and columns. The floor and roof diaphragms consist of cast-in-place concrete slabs and are stiff relative to the walls. Walls consist of infill panels constructed of solid clay brick, concrete block, or hollow clay tile masonry. The seismic performance of this type of construction depends on the interaction between the frame and the infill panels. The combined behavior is more like a shear wall structure than a frame structure. Solidly infilled masonry panels form diagonal compression struts between the intersections of the frame members. If the walls are offset from the frame and do not fully engage the frame members, the diagonal compression struts do not develop. The strength of the infill panel is limited by the shear capacity of the masonry bed joint or the compression capacity of the strut. The postcracking strength is determined by an analysis of a moment frame that is partially restrained by the cracked infill. The shear strength of the concrete columns, after racking of the infill, may limit the semiductile behavior of the system. The foundation system may consist of a variety of elements.





TABLE-	1: MODEL BUILDING TYPE (FROM ASCE 41-13 TABLE 3-1)
C3A Concrete Frames with Infill Masonry Shear Walls (with Flexible Diaphragms)	These buildings are similar to C3 buildings, except that diaphragms consist of wood sheathing or untopped metal deck or have large aspect ratios and are flexible relative to the walls.
PC1 Precast or Tilt-Up Concrete Shear Walls (with Flexible Diaphragms)	These buildings have precast concrete perimeter wall panels that are typically cast on-site and tilted into place. Floor and roof framing consists of wood joists, glulam beams, steel beams, or open web joists. Framing is supported on interior steel or wood columns and perimeter concrete bearing walls. The floors and roof consist of wood sheathing or untopped metal deck. Seismic forces are resisted by the precast concrete perimeter wall panels. Wall panels may be solid or have large window and door openings that cause the panels to behave more as frames than as shear walls. In older construction, wood framing is attached to the walls with wood ledgers. The foundation system may consist of a variety of elements.
PC1A Precast or Tilt- Up Concrete Shear Walls (with Stiff Diaphragms)	These buildings are similar to PC1 buildings, except that diaphragms consist of precast elements, cast-in-place concrete, or metal deck with concrete fill and are stiff relative to the walls.
PC2 Precast Concrete Frames (with Shear Walls)	These buildings consist of a frame assembly of precast concrete girders and columns with the presence of shear walls. Floor and roof framing consists of precast concrete planks, tees, or double-tees supported on precast concrete girders and columns. Seismic forces are resisted by precast or cast-in-place concrete shear walls. Diaphragms consist of precast elements interconnected with welded inserts, cast-in-place closure strips, or reinforced concrete topping slabs. The foundation system may consist of a variety of elements.
PC2A Precast Concrete Frames (without Shear Walls)	These buildings are similar to PC2 buildings, except that concrete shear walls are not present. Seismic forces are resisted by precast concrete moment frames that develop their stiffness through beam—column joints rigidly connected by welded inserts or cast-in-place concrete closures. Diaphragms consist of precast elements interconnected with welded inserts, cast-in-place closure strips, or reinforced concrete topping slabs. The foundation system may consist of a variety of elements.
RM1Reinforced Masonry Bearing Walls with Flexible Diaphragms	These buildings have bearing walls that consist of reinforced brick or concrete block masonry. The floor and roof framing consists of steel or wood beams and girders or open web joists and are supported by steel, wood, or masonry columns. Seismic forces are resisted by the reinforced brick or concrete block masonry shear walls. Diaphragms consist of straight or diagonal wood sheathing, plywood, or untopped metal deck and are flexible relative to the walls. The foundation system may consist of a variety of elements.
RM2 Reinforced Masonry Bearing Walls with Stiff Diaphragms	These building are similar to RM1 buildings, except that the diaphragms consist of metal deck with concrete fill, precast concrete planks, tees, or double-tees, with or without a cast-in-place concrete topping slab and are stiff relative to the walls. The floor and roof framing is supported on interior steel or concrete frames or interior reinforced masonry walls. The foundation system may consist of a variety of elements.





TABLE-	1: MODEL BUILDING TYPE (FROM ASCE 41-13 TABLE 3-1)
URM Unreinforced Masonry Bearing Walls (with Flexible Diaphragms)	These buildings have perimeter bearing walls that consist of unreinforced clay brick, stone, or concrete masonry. Interior bearing walls, where present, also consist of unreinforced clay brick, stone, or concrete masonry. In older construction, floor and roof framing consists of straight or diagonal lumber sheathing supported by wood joists, which, in turn, are supported on posts and timbers. In more recent construction, floors consist of structural panel or plywood sheathing rather than lumber sheathing. The diaphragms are flexible relative to the walls. Where they exist, ties between the walls and diaphragms consist of anchors or bent steel plates embedded in the mortar joints and attached to framing. The foundation system may consist of a variety of elements.
URMA Unreinforced Masonry Bearing Walls (with Stiff Diaphragms)	These buildings are similar to URM buildings, except that the diaphragms are stiff relative to the unreinforced masonry walls and interior framing. In older construction or large, multi-story buildings, diaphragms consist of cast-in-place concrete. In levels of low seismicity, more recent construction consists of metal deck and concrete fill supported on steel framing. The foundation system may consist of a variety of elements.





TA	BLE-2: STRUCTURAL DEFICIENCIES (FROM ASCE 41-13)
Redundancy	The number of lines of moment frames/shear walls/braced frames in each principal direction is greater than or equal to 2. The number of bays of moment frames in each line is greater than or equal to 2. The number of braced bays in each line is greater than 2.
Weak Story Irregularity	The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above.
Soft Story Irregularity	The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force resisting system stiffness of the three stories above.
Mass Irregularity	There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered.
Vertical Discontinuity	All vertical elements in the seismic-force-resisting system are continuous to the foundation.
Torsional Irregularity	The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension.
Deflection Compatibility	Secondary components have the shear capacity to develop the flexural strength of the components.
Short Column	There are no columns at a level with height/depth ratios less than 50% of the nominal height/depth ratio of the typical columns at that level.
Wood Deterioration	There shall be no signs of decay, shrinkage, spitting, fire damage. or sagging in any of the wood members and none of the metal connection hardware shall be deteriorated, broken or loose.
Steel Deterioration	There shall be no visible rusting, corrosion, cracking, or other deterioration in any of the steel elements or connections in the vertical-or lateral-force-resisting systems.
Concrete Deterioration	There shall be no visible deterioration of concrete or reinforcing steel in any of the vertical- or lateral-force-resisting elements.
Weak Column-Steel	The percentage of strong column-weak beam joints in each story of each line of moment frames is greater than 50 %.
Weak Column- Concrete	The sum of moment capacity of the columns is 20% greater than that of the beams at frame joints.
Cripple Wall Bracing	Cripple walls below first-floor-level shear walls are braced to the foundation with wood structural panels.
Topping Slab	Precast concrete diaphragm elements are interconnected by a continuous reinforced concrete topping slab.
Wall Anchorage	Exterior concrete or masonry walls that are dependent on flexible diaphragms for lateral support are anchored for out-of-plane forces at each diaphragm level steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 4.5.3.7.  The connection between the wall panels and the diaphragm does not include cross-grain bending or tension in the wood ledgers.





TA	BLE-2: STRUCTURAL DEFICIENCIES (FROM ASCE 41-13)
Load Path Deficiency	The structure shall contain complete, well-defined load path, including structural elements and connections, that serves to transfer the internal forces associated with the mass of all elements of the building to the foundation.
URM Wall height to thickness ratio	The height-to-thickness ratio of the shear walls at each story is less than the following: Top story of multi-story building:9 First story of multi-story building: 15 All other conditions: 13
URM parapets	Laterally unsupported unreinforced masonry parapets have height-to-thickness ratios no greater than 1.5
Openings in diaphragm at shear walls	Diaphragm openings immediately adjacent to the shear walls are less than 25% of the wall length.





#### **GLOSSARY OF TERMS**

 $S_{XS}$ : Short Period Spectral Response Acceleration in Basic Safety Earthquake 2 (E) (BSE-2E), adjusted for site class, for determining level of seismicity

 $S_{X1}$ : Spectral Response Acceleration at a one-second period in Basic Safety Earthquake 2 (E) (BSE-2E), adjusted for site class, for determining level of seismicity

**BSE-2E:** Basic Safety Earthquake-2 for use with Basic Performance Objective for Existing Buildings, taken as the seismic hazard with 5 % probability of exceedance in 50 years, but not greater than the BSE-2N, at a site.

**BSE-2N:** Basic Safety Earthquake-2 for use with the Basic Performance Objective Equivalent to New Building Standards, taken as the ground shaking based on the Risk-Targeted Maximum Considered Earthquake ( $MCE_R$ ) per ASCE 7 at the site.

T<sub>L</sub>: The long-period transition parameter, to be obtained from UGSG website.

C<sub>s</sub>: Seismic Response Coefficient that the building was design to. "0" if default values are preferred.

T<sub>e</sub>: Elastic period of the building. "0" if default values are preferred.

**Seismic Design Level:** Seismic Design Level that the building was design to. Options are HC (High Code), MC (Moderate Code), LC (Low Code), PC (Pre Code). "0" if default value per Table 2.2 is preferred.

A<sub>v</sub>: Spectral Acceleration at Yield Point

D<sub>v</sub>: Spectral Displacement at Yield Point

A<sub>II</sub>: Spectral Acceleration at Ultimate Point

**D**<sub>u</sub>: Spectral Displacement at Ultimate Point

**Sd,CD:** Median spectral displacement of the Complete Structural Damage

**betaCD:** Lognormal standard deviation- complete structural damage

P[COL|STR5]: Collapse factor

**be:** Elastic damping

**kappa:** Degradation factor

api: Spectral acceleration at the performance point

**dpi:** Spectral displacement at the performance point

P[STR5]: Probability of Complete Structural Damage (See HAZUS-MH MR1 AEBM Technical and

User's Manual- Equation 2-2)

**Seismic Risk Rating:** P[COL|STR5] x P[STR5]





#### PRELIMINARY USRC EARTHQUAKE PERFORMANCE RATING

Earthquake performance rating for 10 selected buildings has been established using the procedures of the United States Resiliency Council's (USRC) rating system. The ratings are translation of findings of existing ASCE 31, FEMA 310, or FEMA 178 seismic evaluations that have been performed by various structural engineers and made available by GSA.

USRC requires the ratings to be based on ASCE 31 or ASCE 41-13 seismic evaluations. However, for buildings that have been evaluated to FEMA 310 or FEMA 178 procedures, engineering judgment has been used to convert findings (as necessary) to comply with ASCE 31 performance definitions and requirements.

It is important to note that the three rating dimensions, [Safety, Damage, and Recovery], are greatly influenced by and dependent on detailed information on nonstructural components. Since the existing evaluation reports generally do not provide such detailed information, the ratings end up as either "One Star" or "Not Evaluated". Furthermore, the simplified translation procedure of utilizing ASCE41-13 / ASCE 31 type evaluation statements generally makes conservative assignment of Repair and Recovery ratings. Alternatively, the rigorous evaluation methodology of FEMA P-58 can produce a more refined understanding of earthquake performance of the building, however, this high order evaluation technique is only warranted if a thorough investigation and evaluation of nonstructural components has been performed for the building.

A summary table of sample USRC ratings is provided in following page. The ratings should be considered as preliminary as they are not yet certified by USRC. The back-up data (ASCE 31 Statements) for the ratings is provided in Attachment 3.





		BUILDING LOCATION			BUI	LDIN	IG D	АТА	EVALU CRIT	ATION ERIA			I	EAR	THQUAK	(E PERFORM	ANCE F	RATIN	3 SYS	TEM (	EPRS	S) / U	SRC	RATING (NOT CE	RTIFIE	D)
												Safety Sub	ratings	Re	epair Cost (D	amage) Subratings		F	ecovery	Subratir	gs			Overall Rating		
Region	Location_Code	Building_Name	City	State	Design Year	No. of Stories above ground	No. of Stories below ground	Model Building Type	Evaluation Criteria	Evaluation Level (T1, T2 or T3)	Structural Safety Subrating	Geological/Foundation Safety Subrating	Nonstructural Safety Subrating	Geologic Repair Cost Subrating		Structural/nonstructural Repair Cost Subrating	Geologic Recovery Subrating	Structural Recovery Subrating	nitial Nonstructural Recovery Subrating	S	Public Use Adjustment	Content Adjustment	Final Nonstructural Recovery Subrating	Safety Rating Repair Cost (Damage) Rating Recovery Rating	Ço	mments
4	AL0039	JOHN A CAMPBELL USCT	MOBILE	AL	1932	5	(	b) (5)	ASCE 31	T1	(p)	(5)														
4	GA0118	FB-PO-CT EAST BUILDING	ROME	GA	1974	3	0		ASCE 31	T2-LDP																
4	SC0018	J. BRATTON DAVIS US BKRPCY CH	COLUMBIA	SC	1936	5	1		ASCE 31	T1																
8	CO0039	BYRON G.ROGERS COURTHOUSE	DENVER	СО	1965	5			FEMA 310	T2																
8	UT0042	FB	SAINT GEORGE	UT	1967	1			ASCE 31	T1																
9	CA0260	ROBERT F. PECKHAM COURTHOUSE	SAN JOSE	CA	1982	5	1		FEMA 310	T3- NSP																
9	CA0269	PASEO INT'L - OTAY MESA	SAN DIEGO	CA	1985	1			FEMA 310	T2																
10	AK0013	FED BLDG,CRTH, And USPO	JUNEAU	AK	1968	11	1		FEMA 310	T2-LSP																
9		LA FEDERAL COURTHOUSE	LOS ANGELES	CA	2014	11	1		Benchmark	(IBC 2009)																
9		50 UN PLAZA (LS Retrofit in 2010)	SAN FRANCISCO	CA	1932	6	1		ASCE 31	T1																

20

<sup>2)</sup> EPRS (SEAONC BRC, 2015) has been developed by the Structural Engineers of Northern California (SEAONC) Building Ratings Committee (BRC). The EPRS ratings are based on findings of ASCE 31 seismic evaluations.

3) The United States Resiliency Council (USRC) ratings are assumed to be similar to the EPRS ratings (exception: USRC 5-Star ratings are not granted without more advance analysis). The USRC ratings presented here have not been reviewed or certified by USRC.

4) Rating is based on confirming brace slenderness, however the report is silent about this issue





Following are definitions of the three rating dimensions/levels:

#### Safety Rating

The SAFETY rating dimension addresses thresholds for the building in terms of the potential for people in the building to get out after an earthquake event and avoid bodily injuries or loss of life during the event. A safety rating is required in all building evaluations.

	Safety Rating											
****	Injuries and blocking of exit paths unlikely Expected performance results in conditions that are unlikely to cause injuries or to keep people from exiting the building.											
****	Serious injuries unlikely Expected performance results in conditions that are unlikely to cause serious injuries.											
***	Loss of life unlikely Expected performance results in conditions that are unlikely to cause loss of life.											
**	Loss of life possible in isolated locations  Expected performance results in conditions associated with partial collapse or falling objects that have potential to cause loss of life at locations within or around the building.											
*	Loss of life likely in the building Expected performance results in conditions associated with building collapse, which has a high potential to cause loss of life within or around the building.											

#### Damage Rating:

The DAMAGE rating dimension reflects an estimate of the cost to repair the building after an event, such that it can continue to be used as it was at the time the rating was last issued.

DAMAGE is defined as a percentage of the building's overall replacement cost, a common insurance concept measuring how much it would cost to construct a new building approximately the same as it was prior to the event. DAMAGE includes the cost of damage to all structural, architectural, mechanical, electrical and plumbing components of a building but does not include the cost of damage to the contents. Contents values may vary depending on how the building was being used at the time of the event. Separately, content damage can be estimated and reported once the contents are defined. DAMAGE is furthermore determined without consideration of overall market conditions in effect following the event, such as post-event increases in local construction costs, and it does not include factors such as business interruption associated with loss of use or occupancy restrictions, design fees, permit fees, historic preservation, or mandatory upgrades triggered by building code regulations.





	Damage Rating
****	Minimal Damage Repair Cost likely less than 5% of building replacement cost.
***	Moderate Damage Repair Cost likely less than 10% of building replacement cost.
***	Significant Damage Repair Cost likely less than 20% of building replacement cost.
**	Substantial damage Repair Cost likely less than 40% of building replacement cost.
*	Severe Damage Repair Cost likely greater than 40% of building replacement cost.
NE	Not Evaluated Repair Cost has not been evaluated.

#### Recovery Rating:

The RECOVERY dimension is an estimate of the time until a property owner or tenant is able to enter and use the building for its basic intended functions.

A RECOVERY rating represents a minimum timeframe to carry out needed repair and to remove major safety hazards and obstacles to occupancy and use. This rating does not address several other factors that can delay the time to regain function, including but not limited to: the condition of external infrastructure (e.g. utilities, transportation) that provide access and services to the building; damage or the post-event state of building contents; or the condition of adjacent buildings.

The complexity and time needed to restore a building to usable condition can increase quickly in relation to the degree of damage. Delays in design, financing, and construction may include time until arrival of special-order equipment or materials, increased prices, a lack of available local design professionals or contractors in a community where many buildings have been damaged, and longer than usual permitting and inspection wait times. Separately, these factors can be estimated and reported, but the actual total time impact of these factors is highly uncertain.

	Recovery Rating										
****	Immediately to days  Expected performance will likely result in people being able to quickly reenter and resume basic functionality of the building from immediately to a few days, excluding external factors.										
***	Within days to weeks  Expected performance may result in delay of basic functionality for days to weeks, excluding external factors.										
***	Within weeks to months  Expected performance may result in delay of basic functionality for weeks to months, excluding external factors.										





	Recovery Rating
**	Within months to a year Expected performance may result in delay of basic functionality for months to a year.
*	More than one year Expected performance may result in delay of basic functionality for at least one year or more.
NE	Not Evaluated Time to regain basic function has not been evaluated.





# ATTACHMENT 1 HAZUS AEBM PARAMETERS FOR CALIFORNIA

# APPENDIX H TO CHAPTER 6 HAZUS AEBM REGULATIONS

6-A1 HAZUS AEBM technology. The Federal Emergency Management Agency (FEMA)/National Institute of Building Sciences (NIBS) Multi-Hazard Loss Estimation Technology (HAZUS-MH MR2) and, specifically, the HAZUS Advanced Engineering Building Module (AEBM) are used by the Office with building-specific parameters, described in this appendix, to evaluate the Probability of Collapse of SPC-1 buildings.

**6-A2 Probability of collapse.** The Probability of Collapse, P[COL], is calculated by Equation (A6-1):

$$P[COL] = P[COL|STR_s] \times P[STR_s]$$
 (A6-1)

where:

P[COL|STR<sub>5</sub>] = collapse factor of the HAZUS AEBM, as

modified herein, and

P[STR<sub>s</sub>] = probability of Complete Structural Damage, based on HAZUS AEBM methods and parameters, as modified herein.

**6-A3 Building-specific properties.** Building-specific properties are based on the building type (structural system), or Model Building Type (MBT), building height (number of stories above seismic base), building age (pre-1933, 1933 – 1961 or post-1961 design vintage), availability of materials testing data, and Significant Structural Deficiencies.

Table A6-1 lists Significant Structural Deficiencies. Table A6-1 includes older buildings (pre-1933 buildings) and buildings that do not have available materials test data, and treats these conditions as Significant Structural Deficiencies.

SPC-1 buildings with no Significant Structural Deficiencies are evaluated using "Baseline" values of building-specific properties. SPC-1 buildings with one or more Significant Structural Deficiencies are evaluated using Sub-Baseline (SubBase), or Ultra-Sub-Baseline (USB) building-specific properties, as specified in Table A6-1.

Building-specific properties include parameters related to (1) building capacity, (2) building response, (3) Complete Structural Damage, and (4) building collapse. Appendix H Sections 6-A4 through 6-A7, define the parameters of interest related to building capacity, building response, Complete Structural Damage and building collapse, respectively, and specify appropriate values of these parameters.

**6-A4. Building capacity.** Building-specific capacity properties of interest include the yield capacity control point  $(D_y, A_y)$  and the ultimate capacity control point  $(D_u, A_u)$ , as calculated by Equations (A6-2 through A6-5, respectively):

$$A_{v} = C_{s} \cdot \gamma / \alpha_{1} \tag{A6-2}$$

$$D_{\nu} = 9.8 \cdot A_{\nu} \cdot T^2 \tag{A6-3}$$

$$A_{\mu} = \lambda \cdot A_{\nu} \tag{A6-4}$$

$$D_{\mu} = \lambda \cdot \mu \cdot D_{\nu} \tag{A6-5}$$

where:

 $C_s$  = seismic design coefficient — values of  $C_s$  are given in Tables A6-2a and A6-2b, respectively,

 $\alpha_1$  = modal weight factor, Alpha 1 — values of  $\alpha_1$  are given in Table A6-4,

 $T_e$  = elastic period, in seconds — values of  $T_e$  are given in Table A6-3,

 $\gamma$  = yield strength factor, Gamma — values of  $\gamma$  are given in Table A6-5,

λ = "overstrength" factor, Lambda — values of λ are given in Table A6-5, and

μ = "ductility" factor, Mu — values of μ are given in Table A6-6.

**6-A5 Building response.** Building-specific response parameters of interest include the elastic damping factor,  $\beta_{\epsilon}$ , and the degradation factor, Kappa. Values of  $\beta_{\epsilon}$  are given in Table A6-7 and values of the Kappa factor are given in Table A6-8.

**6-A-6 Complete structural damage.** Building-specific damage parameters of interest include the median spectral displacement of the Complete Structural Damage state,  $S_{dO}$  and the associated lognormal standard deviation (Beta) factor,  $\beta_C$ . Values of  $\beta_C$  are given in Table A6-11. Median spectral displacement at the Complete Structural Damage state,  $S_{dO}$  is calculated using Equation (A6-6):

$$S_{d,C} = \Delta_C \cdot H_R \cdot \alpha_2 / \alpha_3 \tag{A6-6}$$

where:

 $\Delta_C$  = interstory drift ratio (of the story with maximum drift) at the threshold of Complete Structural Damage — values of  $\Delta_C$  are given in Table A6-9,

 $H_R$  = height of building at the roof level, in inches — default values of  $H_R$  are given in Table A6-3 as a function of the number of stories above grade,

 $\alpha_2$  = modal height factor, Alpha 2 — values of  $\alpha_2$  are given in Table A6-4, and

 $\alpha_3$  = modal shape factor, Alpha 3, relating maximum-story drift and roof drift, values of  $\alpha_3$  are given in Table A6-10.

**6-A-7 Building collapse.** Building-specific values of the collapse factor, P[COL|STR<sub>s</sub>], that describe the fraction of the building likely to be collapsed given that the building has reached the Complete Structural Damage state, STR<sub>s</sub>, are given in Table A6-12.

TABLE A6-1—SIGNIFICANT STRUCTURAL DEFICIENCY MATRIX

	CAPAC	ITY	RESPO	NSE	STRUCT	URAL DA	AMAGE - CO	MPLETE	DAMAGE S	TATE	COLLA	PSE
	Over-Stre	ength	Durat	ion	Frag	gility Cu	rve Median <sup>4</sup>		Fragility	Curve		
SIGNIFICANT STRUCTURAL DEFICIENCY/CONDITION <sup>1</sup>	Gamma and Facto		Degradation Fact		Maximum Drift Ratio		Mode Si (Alpha 3)		Variability - Beta Factor (β <sub>c</sub> )		Collapse Facto (P[COL   STR <sub>5</sub> ])	
DEFICIENCY/CONDITION	SubBase	USB	SubBase	USB <sup>5</sup>	SubBase	USB	SubBase	USB <sup>6</sup>	SubBase	USB⁵	SubBase	USB <sup>6</sup>
Age (Pre-1933 buildings)	X	X <sup>7</sup>										
Materials Testing (None)	X								X			
No Redundancy									X		X	X <sup>6</sup>
Weak Story Irregularity					X		X	$X^6$			X	X <sup>6</sup>
Soft Story Irregularity					X		X	X <sup>6</sup>			X	X <sup>6</sup>
Mass Irregularity					X							
Vertical Descontinuity	X				X							
Torsional Irregularity						X					X	X <sup>6</sup>
Deflection Incompatibility <sup>2</sup>					X				X		X	X <sup>6</sup>
Short Column <sup>3</sup>	X					X						
Wood Deterioration		X	X									
Steel Deterioration		X	X									
Concrete Deterioration		X	X									
Weak Column-Steel	X				X							
Weak Column-Concrete	X		X		X							
No Cripple Wall Bracing					X		X	$X^6$			X	X <sup>6</sup>
Topping Slab	X		X						X		X	X <sup>6</sup>
Inadequate Wall Anchorage/Parapet Bracing		X							X			
Load Path/Diaphragm Openings									X		X	X <sup>6</sup>
URM Wall Thickness Ratio											X	X <sup>6</sup>

<sup>&</sup>lt;sup>1</sup> Sub-Baseline (SubBase) and Ultra-Sub-Baseline (USB) properties are based on one, or more, significant structural deficiencies.

<sup>&</sup>lt;sup>2</sup> The Deflection Incompatibility structural deficiency applies only to concrete systems (C1, C2 and C3).

<sup>&</sup>lt;sup>3</sup> The Short Column structural deficiency applies only to concrete and masonry systems (C1, C2, C3, RM1 and RM2).

<sup>&</sup>lt;sup>4</sup> Effects of deficiencies related to drift and mode shape limited to a combined factor of 5 reduction in Complete median (of HAZUS default value).

<sup>&</sup>lt;sup>5</sup> Grey shading indicates USB performance is not defined/used for deficiencies related to degradation (kappa) and fragility curve (beta) factors.

<sup>&</sup>lt;sup>6</sup> USB performance required for systems with multiple, SubBase deficiencies related to either the mode shape (Alpha 3) factor or the collapse rate.

<sup>&</sup>lt;sup>7</sup> USB performance required for pre-1933 buildings with other over-strength-related deficiencies (else use SubBase performance for pre-1933 buildings).

TABLE A6-2a—SEISMIC DESIGN COEFFICIENT,  $\mathrm{C_s}$  UBC SEISMIC ZONE 4

	Seisn	nic Design Coefficient,	C <sub>s</sub> - UBC Seismic Zon	e 4 Locations (Zone 3	of older editions of the	UBC)
			Structural S	ystem (MBT)		
	S1 a	nd C1	S2, S3, S4, S5,	C2 and C3 (MH)	W1, W2, PC1, PC2	2, RM1, RM2, URM
No. of Stories	Post-61	Pre-61	Post-61	Pre-61	Post-61	Pre-61
1	0.072	0.109	0.100	0.109	0.133	0.109
2	0.057	0.092	0.100	0.092	0.133	0.092
3	0.050	0.080	0.086	0.080	0.114	0.080
4	0.045	0.071	0.078	0.071	0.104	0.071
5	0.042	0.063	0.073	0.063	0.098	0.063
6	0.040	0.057	0.069	0.057	0.092	0.057
7	0.038	0.052	0.066	0.052	0.088	0.052
8	0.036	0.048	0.064	0.048	0.085	0.048
9	0.035	0.044	0.062	0.044	0.082	0.044
10	0.034	0.041	0.060	0.041	0.080	0.041
11	0.032	0.039	0.058	0.039	0.078	0.039
12	0.032	0.036	0.057	0.036	0.076	0.036
13	0.031	0.034	0.056	0.034	0.074	0.034
14	0.030	0.032	0.055	0.032	0.073	0.032
15	0.029	0.031	0.054	0.031	0.072	0.031
16	0.029	0.029	0.053	0.029	0.070	0.029
17	0.028	0.028	0.052	0.028	0.069	0.028
18	0.028	0.027	0.051	0.027	0.068	0.027
19	0.027	0.026	0.051	0.026	0.067	0.026
> = 20	0.027	0.024	0.050	0.024	0.067	0.024

Note (GSA SRR): For Post 1975 Buildings, "High-Code" values from Table 5-4 of HAZUS MR-4 TECHICAL MANUAL is used.

TABLE A6-2b—SEISMIC DESIGN COEFFICIENT,  $C_s$  UBC SEISMIC ZONE 3

	Seismic Design Coefficient, C <sub>s</sub> - UBC Seismic Zone 3 Locations (Zone 2 of older editions of the UBC)												
			Structural S	ystem (MBT)									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	S1 ar	nd C1	S2, S3, S4, S5, (	C2 and C3 (MH)	W1, W2, PC1, PC2, RM1, RM2, URM								
No. of Stories	Post-61	Pre-61	Post-61	Pre-61	Post-61	Pre-61							
1	0.036	0.055	0.050	0.055	0.066	0.055							
2	0.028	0.046	0.050	0.046	0.066	0.046							
3	0.025	0.040	0.043	0.040	0.057	0.040							
4	0.023	0.035	0.039	0.035	0.052	0.035							
5	0.021	0.032	0.037	0.032	0.049	0.032							
6	0.020	0.029	0.035	0.029	0.046	0.029							
7	0.019	0.026	0.033	0.026	0.044	0.026							
8	0.018	0.024	0.032	0.024	0.043	0.024							
9	0.017	0.022	0.031	0.022	0.041	0.022							
10	0.017	0.021	0.030	0.021	0.040	0.021							
11	0.016	0.019	0.029	0.019	0.039	0.019							
12	0.016	0.018	0.029	0.018	0.038	0.018							
13	0.015	0.017	0.028	0.017	0.037	0.017							
14	0.015	0.016	0.027	0.016	0.036	0.016							
15	0.015	0.015	0.027	0.015	0.036	0.015							
16	0.014	0.015	0.026	0.015	0.035	0.015							
17	0.014	0.014	0.026	0.014	0.035	0.014							
18	0.014	0.013	0.026	0.013	0.034	0.013							
19	0.014	0.013	0.025	0.013	0.034	0.013							
> = 20	0.013	0.012	0.025	0.012	0.033	0.012							

Note (GSA SRR): For Post 1975 Buildings, "Moderate-Code" values from Table 5-4 of HAZUS MR-4 TECHICAL MANUAL is used.

TABLE A6-3—DEFAULT BUILDING HEIGHTS AND ELASTIC PERIODS

				DEEAU-3										
	DEFAULT BUILDING HEIGHT, H <sub>R</sub> , AND ELASTIC PERIOD, T <sub>g</sub> . PROPERTIES  Structural System (MBT)													
	W1 AND	) W2 (MH)	S1		C1			62		nd S5	C2, C3, PC2, RM1, RM2, URM		S3 and PC1	
No. of Stories	H <sub>R</sub> (ft)	T <sub>e</sub> (sec)	H <sub>R</sub> (ft)	T <sub>e</sub> (sec)	H <sub>R</sub> (ft)	τ <sub>e</sub> (sec)	H <sub>R</sub> (ft)	T <sub>e</sub> (sec)	H <sub>R</sub> (ft)	T <sub>e</sub> (sec)	H <sub>R</sub> (ft)	T <sub>e</sub> (sec)	H <sub>R</sub> (ft)	<i>T<sub>e</sub></i> (sec)
1	14	0.35	14	0.40	12	0.40	14	0.40	14	0.35	12	0.35	15	0.35
2	24	0.38	24	0.50	20	0.40	24	0.43	24	0.35	20	0.35	25	0.39
3	34	0.49	36	0.69	30	0.48	36	0.59	36	0.44	30	0.39	35	0.50
4	44	0.60	48	0.87	40	0.62	48	0.73	48	0.55	40	0.48		
5	54	0.70	60	1.04	50	0.76	60	0.86	60	0.65	50	0.57		
6			72	1.20	60	0.89	72	0.99	72	0.74	60	0.65		
7			84	1.36	70	1.03	84	1.11	84	0.84	70	0.73		
8			96	1.51	80	1.16	96	1.22	96	0.92	80	0.81		
9		15 23 3	108	1.66	90	1.29	108	1.34	108	1.01	90	0.88		
_10		144	120	1.81	100	1.41	120	1.45	120	1.09	100	0.95		
11			132	1.95	110	1.54	132	1.55	132	1.17	110	1.02		
12			144	2.09	120	1.67	144	1.66	144	1.25	120	1.09		
13			156	2.23	130	1.79	156	1.76	156	1.33	130	1.16		
14			168	2.36	140	1.91	168	1.86	168	1.40	140	1.23		
15			180	2.50	150	2.04	180	1.96	180	1.48	150	1.29		
16			192	2.63	160	2.16	192	2.06	192	1.55	160	1.35		
17		TIME!	204	2.76	170	2.28	204	2.15	204	1.62	170	1.42		
18			216	2.89	180	2.40	216	2.25	216	1.70	180	1.48		
19			228	3.02	190	2.52	228	2.34	228	1.77	190	1.54	Pille	
> = 20			240	3.14	200	2.64	240	2.43	240	1.84	200	1.60		

#### TABLE A6-4-ALPHA 1 AND ALPHA 2, MODAL FACTORS

		ALPHA 1 (α <sub>1</sub> ) - MODA	ALPHA 2 (α <sub>2</sub> ) - MO	ALPHA 2 ( $\alpha_2$ ) - MODAL HEIGHT FACTOR			
		Structural Sy	Structural	Structural System (MBT)			
No. of Stories	S1 and C1	W1, W2, S2, S3, S4, C2, C3, PC2, RM1 and RM2	PC1 and URM	мн	мн	All Systems (except MH)	
1	0.75	0.8	0.75	1.00	1.00	0.75	
2	0.75	0.8	0.75			0.75	
3	0.75	0.8	0.75			0.75	
4	0.75	0.8				0.75	
5	0.75	0.8				0.75	
6	0.73	0.79				0.72	
7_	0.71	0.78				0.69	
8	0.69	0.77				0.66	
9	0.67	0.76				0.63	
10	0.65	0.75				0.60	
11	0.65	0.75				0.60	
12	0.65	0.75				0.60	
13	0.65	0.75				0.60	
14	0.65	0.75			THE REAL PROPERTY.	0.60	
> = 15	0.65	0.75				0.60	

TABLE A6-5—LAMBDA FACTOR

		LAMBDA FACTOR (γ)														
		Baseline Performance Structural System (MBT)				SubBase Performance Structural System (MBT)				USB Performance Structural System (MBT)						
Ro. of Stories (γ)																
	Factor	W1, S1, C1	W2, C2	S4, C3	Other MBT	PC1, URM	W1, S1, C1	W2, C2	S4, C3	Other MBT	PC1, URM	W1, S1, C1	W2, C2	S4, C3	Other MBT	PC1, URM
1	2.70	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
2	2.50	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
3	2.25	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
4	2.00	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
5	1.88	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
6	1.80	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
7	1.75	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
8	1.71	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
9	1.69	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
10	1.67	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
11	1.65	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
12	1.65	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
13	1.65	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
14	1.65	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17
> = 15	1.65	2.00	2.00	1.83	1.67	1.33	1.75	1.75	1.63	1.50	1.25	1.50	1.50	1.42	1.33	1.17

TABLE A6-6-DUCTILITY FACTOR Mu

NO. OF STORIES	Mu (μ) FACTOR (All Systems)				
1	6.00				
2	6.00				
3	4.94				
4	4.41				
5	4.07				
6	3.82				
7	3.63				
8	3.48				
_ 9	3.35				
10	3.24				
11	3.15				
12	3.07				
13	3.00				
14	3.00				
>= 15	3.00				

TABLE A6-7—ELASTIC DAMPING

STRUCTURAL SYSTEM (MBT)	β <sub>E</sub> ELASTIC DAMPING (% of Critical)
S1, S2, S3 and S4	5
C1, C2, PC1 and PC2	7
RM1 and RM2	7
C3 and S5	7
W1 and W2	10

**TABLE A6-8—DEGRADATION KAPPA FACTORS** 

SCENARIO EART	HQUAKE CRITERIA	DEGRADATION (Kappa) FACTORS - $(\kappa_{S}, \kappa_{M} \text{ and } \kappa_{L})$						
Minimum Distance		Baseline P	erformance	SubBase Performance				
Site to Fault <sup>1</sup> (km)	Maximum Magnitude <sup>2</sup>	Post-61	Pre-1961	Post-61	Pre-1961			
< 5	All	0.8	0.7	0.6	0.5			
5 - 10	M <sub>max</sub> ≤ 6.5	0.8	0.7	0.6	0.5			
5 - 10	M <sub>max</sub> > 6.5	0.7	0.6	0.5	0.4			
10 - 25	M <sub>max</sub> ≤ 6.5	0.7	0.6	0.5	0.4			
10 - 25	7.0 ≥ M <sub>max</sub> > 6.5	0.6	0.5	0.4	0.3			
10 - 25	M <sub>max</sub> < 7.0	0.5	0.4	0.3	0.2			
25 - 50	M <sub>max</sub> ≤ 7.0	0.5	0.4	0.3	0.2			
25 - 50	M <sub>max</sub> > 7.0	0.4	0.3	0.2	0.1			
> 50	All	0.4	0.3	0.2	0.1			

- 1. Minimum distance to the fault that controls 1-second period ground motions at the building site.
- 2. Maximum magnitude (M<sub>max</sub>) of fault that controls 1-second ground motions at the building site.

Note (GSA SRR): For Post-1975 buildings, Table 4.7 of VA Phase 1 Report is used.

TABLE A6-9-INTERSTORY DRIFT RATIO - MEDIAN COMPLETE STRUCTURAL DAMAGE

	INTERSTORY DRIFT RATIO (max story) - MEDIAN COMPLETE STRUCTURAL DAMAGE (AC)									
STRUCTURAL SYSTEM	Baseline Pe	erformance	SubBase Pe	erformance	USB Performance					
(MBT)	Post-61	Pre-61	Post-61	Pre-61	Post-61	Pre-61				
W1 and W2 (MH)	0.075	0.075	0.060	0.060	0.038	0.038				
S1, C1, S2 and C2	0.060	0.050	0.050	0.040	0.030	0.025				
S3, S4, PC1, PC2, RM1 and RM2	0.053	0.044	0.044	0.035	0.027	0.022				
S5, C3 and URM		0.035		0.028		0.018				

Note GSA SRR): For Post-1975 buildings, Table 5.3 a to 5.3 h of VA Phase 1 Report is used.

TABLE A6-10-ALPHA 3 (À3) MODAL SHAPE FACTOR

	ALPHA 3 ( $lpha_3$ ) MODAL SHAPE FACTOR - RATION OF MAXIMUM INTERSTORY DRIFT TO AVERAGE INTERSTORY DRIFT											
No. of Stories		combined with E y Drift Ratios (T			ombined with S Drift Ratios (T		When Combined with USB Interstory Drift Ratios (Table A6-9)					
	Baseline Performance	SubBase Performance	USB Performance	Baseline Performance	SubBase Performance	USB Performance	Baseline Performance	SubBase Performance	USB Performance			
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
2	1.21	1.62	2.03	1.21	1.62	2.03	1.21	1.62	2.03			
3	1.35	2.04	2.73	1.35	2.04	2.73	1.35	2.04	2.50			
4	1.45	2.36	3.27	1.45	2.36	3.27	1.45	2.36	2.50			
5	1.54	2.63	3.72	1.54	2.63	3.72	1.54	2.50	2.50			
6	1.62	2.87	4.11	1.62	2.87	4.00	1.62	2.50	2.50			
7	1.69	3.07	4.46	1.69	3.07	4.00	1.69	2.50	2.50			
8	1.75	3.26	4.77	1.75	3.26	4.00	1.75	2.50	2.50			
9	1.81	3.43	5.00	1.81	3.43	4.00	1.81	2.50	2.50			
10	1.86	3.59	5.00	1.86	3.59	4.00	1.86	2.50	2.50			
11	1.91	3.73	5.00	1.91	3.73	4.00	1.91	2.50	2.50			
12	1.96	3.87	5.00	1.96	3.87	4.00	1.96	2.50	2.50			
13	2.00	4.00	5.00	2.00	4.00	4.00	2.00	2.50	2.50			
14	2.04	4.12	5.00	2.04	4.00	4.00	2.04	2.50	2.50			
> = 15	2.08	4.23	5.00	2.08	4.00	4.00	2.08	2.50	2.50			

TABLE A6-11—LOGNORMAL STANDARD DEVIATION (BETA) VALUES — COMPLETE STRUCTURAL DAMAGE

	LOGNORMAL STANDARD DEVIATION (BETA) VALUES — COMPLETE STRUCTURAL DAMAGE ( $eta_{m{c}}$ )					
	Baseline Pe	erformance	SubBase Performance			
NO. OF STORIES	Post-61	Pre-61	Post-61	Pre-61		
1	0.85	0.90	0.95	1.00		
2	0.85	0.90	0.95	1.00		
3	0.85	0.90	0.95	1.00		
4	0.84	0.89	0.94	0.99		
5	0.83	0.88	0.93	0.98		
6	0.82	0.87	0.92	0.97		
7	0.81	0.86	0.91	0.96		
8	0.80	0.85	0.90	0.95		
9	0.79	0.84	0.89	0.94		
10	0.78	0.83	0.88	0.93		
11	0.77	0.82	0.87	0.92		
12	0.76	0.81	0.86	0.91		
13	0.75	0.80	0.85	0.90		
14	0.75	0.80	0.85	0.90		
> = 15	0.75	0.80	0.85	0.90		

Note (GSA SRR): For Post -1975 buildings, Table 5.5 c of VA Phase 1 Report is used.

**TABLE A6-12—COLLAPSE FACTOR** 

	COLLAPSE FACTOR - LIKELIHOOD	OF COLLAPSE GIVEN COMPLETE STR	UCTURAL DAMAGE - P[COL STR <sub>5</sub> ]
STRUCTURAL SYSTEM (MBT)	Baseline Performance	SubBase Performance	USB Performance
W1 and W2	0.05	0.10	XXX 0.4 See N
S1, S2, S3, S4 and S5	0.08	0.15	0.30
C1, C2 and C3	0.13	0.25	0.50
RM1 and RM2	0.13	0.25	0.50
PC1 and PC2	0.15	0.30	0.60

Note (GSA SRR): For W1 and W2 MBT's, Collapse Factor = 0.4. This is to capture multistory wood buildings with weak story deficiency.





## ATTACHMENT 2 HAZUS AEBM PARAMETERS FOR STATES OTHER THAN CALIFORNIA

## **HAZUS AEBM USER MANUAL**

## (HAZUS MR-4 TECHICAL MANUAL)

Table 5.4 Code Building Capacity Parameters - Design Strength (C<sub>s</sub>)

Building	Seismic Design Level (Fraction of Building Weight)				
Туре	High-Code	Moderate- Code	Low-Code	Pre-Code	
W1	0.200	0.150	0.100	0.100	
W2	0.200	0.100	0.050	0.050	
S1L	0.133	0.067	0.033	0.033	
S1M	0.100	0.050	0.025	0.025	
S1H	0.067	0.033	0.017	0.017	
S2L	0.200	0.100	0.050	0.050	
S2M	0.200	0.100	0.050	0.050	
S2H	0.150	0.075	0.038	0.038	
S3	0.200	0.100	0.050	0.050	
S4L	0.160	0.080	0.040	0.040	
S4M	0.160	0.080	0.040	0.040	
S4H	0.120	0.060	0.030	0.030	
S5L			0.050	0.050	
S5M			0.050	0.050	
S5H			0.038	0.038	
C1L	0.133	0.067	0.033	0.033	
C1M	0.133	0.067	0.033	0.033	
C1H	0.067	0.033	0.017	0.017	
C2L	0.200	0.100	0.050	0.050	
C2M	0.200	0.100	0.050	0.050	
C2H	0.150	0.075	0.038	0.038	
C3L			0.050	0.050	
C3M			0.050	0.050	
C3H			0.038	0.038	
PC1	0.200	0.100	0.050	0.050	
PC2L	0.200	0.100	0.050	0.050	
PC2M	0.200	0.100	0.050	0.050	
PC2H	0.150	0.075	0.038	0.038	
RM1L	0.267	0.133	0.067	0.067	
RM1M	0.267	0.133	0.067	0.067	
RM2L	0.267	0.133	0.067	0.067	
RM2M	0.267	0.133	0.067	0.067	
RM2H	0.200	0.100	0.050	0.050	
URML			0.067	0.067	
URMM			0.067	0.067	
МН	0.100	0.100	0.100	0.100	

,,									
< 5	All		1	0.9	8.0	0.7	0.6	0.5	0.4
5 - 10	M <sub>max</sub> <= 6.5		2	0.9	8.0	0.7	0.6	0.5	0.4
5 - 10	M <sub>max</sub> > 6.5		3	0.8	0.7	0.6	0.5	0.4	0.3
10 - 25	M <sub>max</sub> <= 6.5		4	0.8	0.7	0.6	0.5	0.4	0.3
10 - 25	$7.0 >= M_{max} > 6.5$		5	0.7	0.6	0.5	0.4	0.3	0.2
10 - 25	M <sub>max</sub> > 7.0	VH, H	6	0.6	0.5	0.4	0.3	0.2	0.1
25 - 50	M <sub>max</sub> <= 7.0		7	0.6	0.5	0.4	0.3	0.2	0.1
25 - 50	$M_{max} > 7.0$	МН	8	0.5	0.4	0.3	0.2	0.1	0.1
> 50	All	L, ML	9	0.5	0.4	0.3	0.2	0.1	0.1

- 1. Minimum distance to the fault that controls short-period ground motions (used to determine response of MBTs with Te < 0.8 Ts) or 1-second response (used to determine response of MBTs with Te > 0.8 Ts) at the building site.
- 2. Maximum magnitude (Mmax) of fault that controls short-period or 1-second ground motions at the building site
- 3. Use VA Seismicity Index (Table 1.1) when scenario properties unknown.

C2	0.005	0.013	0.038	0.100
S3, S4, PC1, PC2, RM1, RM2	0.005	0.010	0.030	0.088
S5, C3, URM	0.003	0.006	0.015	0.035

Table 5-3b Values of median structural drift ratios as a function of model building type, buildings with Baseline performance and High Code seismic design.

Model Building Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1, W2	0.004	0.012	0.040	0.100	
S1	0.006	0.012	0.030	0.080	
C1, S2	0.005	0.010	0.030	0.080	
C2	0.004	0.010	0.030	0.080	
S3, S4, PC1, PC2, RM1, RM2	0.004	0.008	0.024	0.070	
S5, C3, URM	0.003	0.006	0.015	0.035	

Table 5-3c Values of median structural drift ratios as a function of model building type for buildings with Baseline performance and Moderate Code seismic design (and SubBase performance/High Code design)

Model Building Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1, W2	0.004	0.010	0.031	0.075	
S1	0.006	0.010	0.024	0.060	
C1, S2	0.005	0.009	0.023	0.060	
C2	0.004	0.008	0.023	0.060	
S3, S4, PC1, PC2, RM1, RM2	0.004	0.007	0.019	0.053	
S5, C3, URM	0.003	0.006	0.015	0.035	

Table 5-3d Values of median structural drift ratios as a function of model building type for buildings with Baseline performance and Low Code seismic design (and SubBase performance/Moderate Code design)

Model Puilding Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1, W2	0.004	0.010	0.025	0.060	
S1	0.006	0.010	0.020	0.050	
C1, S2	0.005	0.008	0.020	0.050	
C2	0.004	0.008	0.020	0.050	
S3, S4, PC1, PC2, RM1, RM2	0.004	0.006	0.016	0.044	
S5, C3, URM	0.003	0.006	0.015	0.035	

Table 5-3e Values of median structural drift ratios as a function of model building type for buildings with Baseline performance and Pre-Code seismic design (and SubBase performance/Low Code design or USB performance/High Code design)

Model Building Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1,W2	0.003	0.008	0.020	0.050	
S1	0.005	0.008	0.016	0.040	
C1, S2	0.004	0.006	0.016	0.040	
C2	0.003	0.006	0.016	0.040	
S3, S4, PC1, PC2, RM1, RM2	0.003	0.005	0.013	0.035	
S5, C3, URM	0.002	0.005	0.012	0.028	

Table 5-3f Values of median structural drift ratios as a function of model building type for buildings with SubBase performance and Pre-Code seismic design (and USB performance/Moderate Code design)

Model Building Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1,W2	0.003	0.008	0.018	0.045	
S1	0.005	0.008	0.012	0.030	
C1, S2	0.004	0.006	0.012	0.030	
C2	0.003	0.006	0.012	0.030	
S3, S4, PC1, PC2, RM1, RM2	0.003	0.005	0.010	0.027	
S5, C3, URM	0.002	0.005	0.008	0.018	

Table 5-3g Values of median structural drift ratios as a function of model building type for buildings with USB performance and Low Code seismic design

Model Building Type	Structural Damage State				
Model Building Type	Slight	Moderate	Extensive	Complete	
W1,W2	0.003	0.008	0.015	0.038	
S1	0.005	0.008	0.010	0.025	
C1, S2	0.004	0.006	0.010	0.025	
C2	0.003	0.006	0.010	0.025	
S3, S4, PC1, PC2, RM1, RM2	0.003	0.005	0.008	0.022	
S5, C3, URM	0.002	0.005	0.008	0.018	

Table 5-3h Values of median structural drift ratios as a function of model building type for buildings with USB performance and Pre-Code seismic design

Model Building Type	Structural Damage State				
model Building Type	Slight	Moderate	Extensive	Complete	
W1,W2	0.003	0.008	0.015	0.030	
S1	0.005	0.008	0.010	0.020	
C1, S2	0.004	0.006	0.010	0.020	
C2	0.003	0.006	0.010	0.020	
S3, S4, PC1, PC2, RM1, RM2	0.003	0.005	0.008	0.018	
S5, C3, URM	0.002	0.005	0.008	0.014	

9	0.74	0.79	0.84	0.89	0.84	0.89	0.94	0.99
10	0.73	0.78	0.83	0.88	0.83	0.88	0.93	0.98
11	0.72	0.77	0.82	0.87	0.82	0.87	0.92	0.97
12	0.71	0.76	0.81	0.86	0.81	0.86	0.91	0.96
13	0.70	0.75	0.80	0.85	0.80	0.85	0.90	0.95
14	0.70	0.75	0.80	0.85	0.80	0.85	0.90	0.95
15	0.70	0.75	0.80	0.85	0.80	0.85	0.90	0.95
Factor			Approximate	e Value or Ra	nge of Contrib	outing Factor		
κ	0.5-0.8	0.4-0.7	0.3-0.6	0.2-0.5	0.4-0.7	0.3-0.6	0.2-0.5	0.1-0.4
βc	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
$\beta_{T,ds}$	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.5





## <u>ATTACHMENT 3</u> USRC RATING – ASCE 31 EVALUATION STATEMENTS





bulluling.	ALUU33	JOHN A CAIVIPBLLE OSCI										
			URMA (Unreinforced	Masonry Bearing Walls-Stiff Diaphragms)								
ASCE 31 Tier 2					Co	•	Required ub-Rating					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	С	C		C		С		
4.3.1.3	Basic	Building System	General	MEZZANINES	С	C			NA fo	r LS in low	seismi	icity
4.3 2.1	Basic	Building System	Configuration	WEAK STORY	С	C		C	NA fo	r LS in low	seismi	icity
4.3 2.2	Basic	Building System	Configuration	SOFT STORY	С	C	. (	C	NA fo	r LS in low	seismi	icity
4.3 2.3	Basic	Building System	Configuration	GEOMETRY	С	C		C	NA fo	r LS in low	seismi	icity
4.3 2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	С	C		C	NA fo	r LS in low	seismi	icity
4.3 2.5	Basic	Building System	Configuration	MASS	С	C		C	NA fo	r LS in low	seismi	icity
4.3 2.6	Basic	Building System	Configuration	TORSION	С	C		C	NA fo	r LS in low	seismi	icity
4.4 2.1.1	Basic	Lateral Force Resisting System	Shear Walls	REDUNDANCY, shear walls	С	C			NA fo	r LS in low	seismi	icity
4.4 2.5.1	Basic	Lateral Force Resisting System	Shear Walls	SHEAR STRESS CHECK, URM walls	С	C		C	NA fo	r LS in low	seismi	icity
4.6.1.1	Basic	Connections	Anchorage for Normal Forces	WALL ANCHORAGE	С	C		C		NC		
4.6 2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (LS)	С	C		C	NA fo	r LS in low	seismi	icity
4.6 2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (IO)	С				NA fo	r LS in low	seismi	icity
4.6.4.1	Basic	Connections	Interconnection of Elements	GIRDER/COLUMN CONNECTION	С	C		C	NA fo	r LS in low	seismi	icity
4.4 2.5.2	Supplemental	Lateral Force Resisting System	Shear Walls	PROPORTIONS, URM	С	C		C	NA fo	r LS in low	seismi	icity
4.4 2.5.3	Supplemental	Lateral Force Resisting System	Shear Walls	MASONRY LAY-UP	С	C			NA fo	r LS in low	seismi	icity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (LS)	С	C			NA fo	r LS in low	seismi	icity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (IO)	С				NA fo	r LS in low	seismi	icity
4.5.1.6	Supplemental	Diaphragms	General	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS (LS)	С	C			NA fo	r LS in low	seismi	icity
4.5.1.6	Supplemental	Diaphragms	General	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS (IO)	С				NA fo	r LS in low	seismi	icity
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	С				NA fo	r LS in low	seismi	icity
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	С				NA fo	r LS in low	seismi	icity
4.6.4.5	Supplemental	Connections	Interconnection of Elements	BEAM, GIRDER AND TRUSS SUPPORTS	С	C		C	NA fo	r LS in low	seismi	icity

Note: C=Compliance required for the safety sub-rating shown





		Ge	ologic Site Hazards and Foundations								
ASCE 31 Tier 2				Co	•	Required ub-Rating	II.				
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	C	C	C	NA fo	r LS in lov	v seismic	city
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	C	C		NA fo	r LS in lov	v seismic	city
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	C	C	C	NA fo	r LS in lov	v seismic	city
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	C	C	С	NA fo	r LS in lov	v seismic	city
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	C	C		NA fo	r LS in lov	v seismic	city
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	C	C		NA fo	r LS in lov	v seismic	city
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C				NA fo	r LS in lov	v seismic	ity
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C				NA fo	r LS in lov	v seismic	city

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building:	AL0039	JOHN A CAMPBELL USCT	Newstanistical Cafata Cale and								
	<u> </u>		Nonstructural Safety Sub-rat	ing					1	1	
ASCE 31 Tier 2				Co	mpliance Safety s	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C			С		r LS in lo	w seismi	icity
4 8.1 2	Supplemental	Partitions	DRIFT	C	C				r LS in lo		
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C				NA fo	r LS in lo	w seismi	icity
4 8.1.4	Supplemental	Partitions	TOPS	C				NA fo	r LS in lo	w seismi	icity
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.2.1	Basic	Ceilings	SUPPORT	C	C			NA fo	r LS in lo	w seismi	icity
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C	C			NA fo	r LS in lo	w seismi	icity
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C	C			NA fo	r LS in lo	w seismi	icity
4 8.2 5	Supplemental	Ceilings	EDGES	C				NA fo	r LS in lo	w seismi	icity
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	C				NA fo	r LS in lo	w seismi	icity
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C	C				N		
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C				NA fo	r LS in lo	w seismi	icity
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C				NA fo	r LS in lo	w seismi	icity
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	C		C		U		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	C			NA fo	r LS in lo	w seismi	icity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.5 2	Basic	Masonry Veneer	TIES	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C	C			NA fo	r LS in lo	w seismi	icity
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C	C			NA fo	r LS in lo	w seismi	icity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	C			NA fo	r LS in lo	w seismi	icity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	C			NA fo	r LS in lo	w seismi	icity
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C			NA fo	r LS in lo	w seismi	icity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C				NA fo	r LS in lo	w seismi	icity
4 8.8.1	Basic	Appendages	URM PARAPETS	C	C		С		N	2	
4 8.8 2	Basic	Appendages	CANOPIES	C	C		C		N/	A	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	C		С	NA fo	r LS in lo	w seismi	icity
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C				NA fo	r LS in lo	w seismi	icity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C	C		C	NA fo	r LS in lo	w seismi	icity
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C	_		С	NA fo	r LS in lo	w seismi	icity
4 8.10.1	Basic	Stairs	URM WALLS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.10.2	Basic	Stairs	STAIR DETAILS	С	C		С	NA fo	r LS in lo	w seismi	icity
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C	C		С	NA fo	r LS in lo	w seismi	icity
4 8.11.2	Supplemental	Contents	FILE CABINETS	C	C			NA fo	r LS in lo	w seismi	icity
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C	C			NA fo	r LS in lo	w seismi	icity
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C				NA fo	r LS in lo	w seismi	icity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C	C		С		N	=	





Dunuing.			Nonstructural Safety Sub-ratin	g							
ASCE 31 Tier 2			TO THE WORLD COLOR OF THE PROPERTY OF THE PROP	1	•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	(	. (				NC		
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	(				NA f	or LS in lov	w seismic	ity
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	(	. (			NA f	or LS in lov	w seismic	ity
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	(				NA f	or LS in lov	w seismic	ity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	(				NA f	or LS in lov	w seismic	ity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	(				NA f	or LS in lov	w seismic	ity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	(	. (	(	C	NA f	or LS in lov	w seismic	ity
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	(				NA f	or LS in lov	w seismic	ity
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	(				NA f	or LS in lov	w seismic	ity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	(				NA f	or LS in lov	w seismic	ity
4 8.13.5	Supplemental	Piping	C-CLAMPS	(				NA f	or LS in lov	w seismic	ity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	(	. (	(		NA f	or LS in lov	w seismic	ity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	(				NA f	or LS in lov	w seismic	ity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	(				NA f	or LS in lov	w seismic	ity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	(	. (	(	C	NA f	or LS in lov	w seismic	ity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	(	. (	(		NA f	or LS in lov	w seismic	ity
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	(	. (			NA f	or LS in lov	w seismic	ity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	(				NA f	or LS in lov	w seismic	ity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(				NA f	or LS in lov	w seismic	ity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	(				NA f	or LS in lov	w seismic	ity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	(				NA f	or LS in lov	w seismic	ity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	(				NA f	or LS in lov	w seismic	ity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	(				NA f	or LS in lov	w seismic	ity
4 8.16.7	Supplemental	Elevators	BRACKETS	(				NA f	or LS in lov	w seismic	ity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	(				NA fo	or LS in lov	w seismic	ity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	(				NA f	or LS in lov	w seismic	ity

Note: C=Compliance required for the nonstructural safety sub-rating shown.





Building.			Nonstructural Recovery Sub-	rating							
ASCE 31 Tier 2				Co	-	Required ub-Rating	for				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	С						ow seismicity
4 8.1 2	Supplemental	Partitions	DRIFT	C	С						ow seismicity
4 8.1.4	Supplemental	Partitions	TOPS	С	С						ow seismicity
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C					NA for	LS in le	ow seismicity
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	С				NA for	LS in l	ow seismicity
4 8.2.1	Basic	Ceilings	SUPPORT	C	С				NA for	LS in le	ow seismicity
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C					NA for	LS in l	ow seismicity
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C					NA for	LS in l	ow seismicity
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	С					NA for	LS in l	ow seismicity
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	C							ow seismicity
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C	С	C					C
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C	C				NA for		ow seismicity
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C	C						ow seismicity
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C	Ŭ						ow seismicity
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	С						J
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C	C				NA for		ow seismicity
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C	C						ow seismicity
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	C						ow seismicity
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	C						ow seismicity
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C	С				NA for	LS in l	ow seismicity
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С	С				NA for	LS in l	ow seismicity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	С				NA for	LS in l	ow seismicity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C	С				NA for	LS in le	ow seismicity
4 8.5 2	Basic	Masonry Veneer	TIES	C	С				NA for	LS in le	ow seismicity
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	С				NA for	LS in l	ow seismicity
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C	C				NA for	LS in l	ow seismicity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	С				NA for	LS in l	ow seismicity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C	С				NA for	LS in l	ow seismicity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	С				NA for	LS in l	ow seismicity
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C				NA for	LS in l	ow seismicity
4 8.8.1	Basic	Appendages	URM PARAPETS	C	C					N	С
4 8.8 2	Basic	Appendages	CANOPIES	C	С					N	A
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C	C				NA for	LS in l	ow seismicity
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	С						ow seismicity
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C	С						ow seismicity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C	С						ow seismicity
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C	С						ow seismicity
4 8.10.2	Basic	Stairs	STAIR DETAILS	C	С						ow seismicity
4 8.10.1	Basic	Stairs	URM WALLS	C	С						ow seismicity
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C	С						ow seismicity
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	С	C					ow seismicity
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С					NA for	LS in l	ow seismicity
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	C					NA for	LS in l	ow seismicity
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	C					NA for	LS in l	ow seismicity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C	С	C				N	C





bullullig.			Nonstructural Recovery Sub-ra	ting							
ASCE 31 Tier 2			Tronstructural necessary sub-ra		•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	С	C				N	С
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	C			NA for	LS in l	ow seismicity
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	C	C			NA for	LS in l	ow seismicity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	С	C	C			NA for	LS in l	ow seismicity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C	C	)		NA for	LS in l	ow seismicity
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C					NA for	LS in l	ow seismicity
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	C	C		NA for	LS in l	ow seismicity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	C	C		NA for	LS in l	ow seismicity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	C	C	C		NA for	LS in l	ow seismicity
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	С	C	C	C		NA for	LS in l	ow seismicity
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	C	C			NA for	LS in l	ow seismicity
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C				NA for	LS in l	ow seismicity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C	C			NA for	LS in l	ow seismicity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	C	C			NA for	LS in l	ow seismicity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C	C			NA for	LS in l	ow seismicity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	C	C		NA for	LS in l	ow seismicity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	C	C		NA for	LS in l	ow seismicity
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	C	C		NA for	LS in l	ow seismicity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C	C			NA for	LS in l	ow seismicity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C	C			NA for	LS in l	ow seismicity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C	C			NA for	LS in l	ow seismicity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	C	C			NA for	LS in l	ow seismicity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	C	C			NA for	LS in l	ow seismicity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	C	C			NA for	LS in l	ow seismicity
4 8.16.7	Supplemental	Elevators	BRACKETS	C	C	C			NA for	LS in l	ow seismicity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C	C			NA for	LS in l	ow seismicity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C	C	C			NA for	LS in l	ow seismicity

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





Dunung.	G/10110		C1	(Concrete Moment Frames)								
ASCE 31 Tier 2					Co	•	e Require sub-Ratin					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	(		С	C		•	С	
4.3.1.2	Basic	Building System	General	ADJACENT BUILDINGS	(		С	С			NC	
4.3.1.3	Basic	Building System	General	MEZZANINES	(		С	С			NA	
4.3 2.1	Basic	Building System	Configuration	WEAK STORY	(		С	C	2		С	
4.3 2.2	Basic	Building System	Configuration	SOFT STORY	(		С	C			С	
4.3 2.3	Basic	Building System	Configuration	GEOMETRY	(		С	C			С	
4.3 2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	(		С	C			NC	
4.3 2.5	Basic	Building System	Configuration	MASS	(		С	C			С	
4.3 2.6	Basic	Building System	Configuration	TORSION	(		С	C			NC	
4.3 3.5	Basic	Building System	Condition of Materials	POST-TENSIONING ANCHORS	(		С	С			NA	
4.4.1.1.1	Basic	Lateral Force Resisting System	Moment Frames	REDUNDANCY, moment frames (LS)	(		С	С			С	
4.4.1.1.1	Basic	Lateral Force Resisting System	Moment Frames	REDUNDANCY, moment frames (IO)	(						U	
4.4.1.2.1	Basic	Lateral Force Resisting System	Moment Frames	INTERFERING WALLS	(		С	C			NC	
4.4.1.4.1	Basic	Lateral Force Resisting System	Moment Frames	SHEAR STRESS CHECK, concrete columns	(		С	C			NC	
4.4.1.4.2	Basic	Lateral Force Resisting System	Moment Frames	AXIAL STRESS CHECK, concrete columns	(		С	C			С	
4.6 3.2	Basic	Connections	Vertical Components	CONCRETE COLUMNS (LS)	(		С	C			С	
4.6 3.2	Basic	Connections	Vertical Components	CONCRETE COLUMNS (IO)	(						U	
4.4.1.4.3	Supplemental	Lateral Force Resisting System	Moment Frames	FLAT SLAB FRAMES	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.4	Supplemental	Lateral Force Resisting System	Moment Frames	PRESTRESSED FRAME ELEMENTS	(		С	С	NA f	or LS in m	oderate se	ismicity
4.4.1.4.5	Supplemental	Lateral Force Resisting System	Moment Frames	CAPTIVE COLUMNS (LS)	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.5	Supplemental	Lateral Force Resisting System	Moment Frames	CAPTIVE COLUMNS (IO)	(				NA f	or LS in m	oderate se	ismicity
4.4.1.4.6	Supplemental	Lateral Force Resisting System	Moment Frames	NO SHEAR FAILURES	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.7	Supplemental	Lateral Force Resisting System	Moment Frames	STRONG COLUMN/WEAK BEAM, concrete	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.8	Supplemental	Lateral Force Resisting System	Moment Frames	BEAM BARS	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.9	Supplemental	Lateral Force Resisting System	Moment Frames	COLUMN-BAR SPLICES (LS)	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.9	Supplemental	Lateral Force Resisting System	Moment Frames	COLUMN-BAR SPLICES (IO)	(	C			NA f	or LS in m	oderate se	ismicity
4.4.1.4.10	Supplemental	Lateral Force Resisting System	Moment Frames	BEAM BAR SPLICES	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.11	Supplemental	Lateral Force Resisting System	Moment Frames	COLUMN-TIE SPACING	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.12	Supplemental	Lateral Force Resisting System	Moment Frames	STIRRUP SPACING	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.13	Supplemental	Lateral Force Resisting System	Moment Frames	JOINT REINFORCING	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.4.14	Supplemental	Lateral Force Resisting System	Moment Frames	JOINT ECCENTRICITY	(		С	С	NA f	or LS in m	oderate se	ismicity
4.4.1.4.15	Supplemental	Lateral Force Resisting System	Moment Frames	STIRRUP AND TIE HOOKS	(		С	С	NA f	or LS in m	oderate se	ismicity
4.4.1.6.2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (LS)	(		С	C	NA f	or LS in m	oderate se	ismicity
4.4.1.6.2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (IO)	(				NA f	or LS in m	oderate se	ismicity
4.4.1.6.3	Supplemental	Lateral Force Resisting System	Moment Frames	FLAT SLABS	(		С	C	NA f	or LS in m	oderate se	ismicity
4.5.1.1	Supplemental	Diaphragms	General	DIAPHRAGM CONTINUITY	(		С	C	NA f	or LS in m	oderate se	ismicity
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	(				NA f	or LS in m	oderate se	ismicity
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	(				NA f	or LS in m	oderate se	ismicity
4.6 3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	(		С	С	NA f	or LS in m	oderate se	ismicity
4.6 3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	(				NA f	or LS in m	oderate se	ismicity

Note: C=Compliance required for the safety sub-rating shown





			Geologic Site Hazards and Foundations								
ASCE 31 Tier 2				Co	mpliance Safety sı	Required ub-Rating					
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	С	C	C			С	
4.7.1.2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	С	C				С	
4.7.1.3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	С		C			С	
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	С	C	C		1	۱A	
4.7.3.2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	С	C		NA fo	r LS in mo	derate se	ismicity
4.7.3.3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	С	C		NA fo	r LS in mo	derate se	ismicity
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C				NA fo	r LS in mo	derate se	ismicity
4.7.3.5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C				NA fo	r LS in mo	derate se	ismicity

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building:	GAU118	FR-PO-C1 - EAST BUILDING	Nonstructural Safety Sub-ra	ating							
ASCE 31 Tier 2						ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	С	(				NC	
4 8.1 2	Supplemental	Partitions	DRIFT	С	С				r LS in mo		
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С					r LS in mo		
4 8.1.4	Supplemental	Partitions	TOPS	С					r LS in mo		
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С				NA for	r LS in mo		ismicity
4 8.2.1	Basic	Ceilings	SUPPORT	С						С	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С	С				r LS in mo		
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С	С				r LS in mo		
4 8.2 5	Supplemental	Ceilings	EDGES	С					r LS in mo		
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С					r LS in mo		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С				NA for	r LS in mo		ismicity
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С						С	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С					r LS in mo		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С				NA for	r LS in mo		ismicity
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	C	(				С	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	С		4			С	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С						NA	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	С	(				С	
4 8.4.6	Basic	Cladding & glazing	INSERTS	С	·					С	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	С					С	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С					r LS in mo		
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	С			NA for	r LS in mo	derate se	ismicity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	С					С	
4 8.5 2	Basic	Masonry Veneer	TIES	С						С	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С	С					С	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	С					r LS in mo		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С					r LS in mo		
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С					r LS in mo		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	С				r LS in mo		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	С				r LS in mo		
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С				NA for	r LS in mo		ismicity
4 8.8.1	Basic	Appendages	URM PARAPETS	С	С	(				AV	
4 8.8 2	Basic	Appendages	CANOPIES	С	С					NA	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	С				r LS in mo		
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С		(			r LS in mo		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С				NA for	r LS in mo		ismicity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С	С					NA	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С				NA for	r LS in mo		ismicity
4 8.10.1	Basic	Stairs	URM WALLS	С						VC	
4 8.10.2	Basic	Stairs	STAIR DETAILS	С						NA	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С						NC	
4 8.11.2	Supplemental	Contents	FILE CABINETS	С					r LS in mo		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	С				r LS in mo		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С				NA for	r LS in mo		ismicity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С	С	(				С	





Dunuing.			Nonstructural Safety Sub-rat	ting							
ASCE 31 Tier 2					mpliance Safety s	Required ub-Ratin					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C			С			NA	•
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C		:	С		I	NC	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C	. (			NA fo	r LS in mo	derate se	ismicity
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C				NA fo	r LS in mo	derate se	ismicity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C				NA fo	r LS in mo	derate se	ismicity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C				NA fo	r LS in mo	derate se	ismicity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C			C (			NC	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C			С			NC	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	C				NA fo	r LS in mo	derate se	ismicity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C				NA fo	r LS in mo	derate se	ismicity
4 8.13.5	Supplemental	Piping	C-CLAMPS	C				NA fo	r LS in mo	derate se	ismicity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C			С	NA fo	r LS in mo	derate se	ismicity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C				NA fo	r LS in mo	derate se	ismicity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C				NA fo	r LS in mo	derate se	ismicity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C			C (	NA fo	r LS in mo	derate se	ismicity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C			С		1	NΑ	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C			С	NA fo	r LS in mo	derate se	ismicity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.7	Supplemental	Elevators	BRACKETS	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C				NA fo	r LS in mo	derate se	ismicity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C				NA fo	r LS in mo	derate se	ismicity

Note: C=Compliance required for the nonstructural safety sub-rating shown.





Building:			Nonstructural Recovery Sub-	rating							
ASCE 31 Tier 2			,		mpliance Safety s	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	(	С				N	iC	ı
4 8.1 2	Supplemental	Partitions	DRIFT	(	С			NA for	LS in mo	derate se	ismicity
4 8.1.4	Supplemental	Partitions	TOPS	(	C			NA for	LS in mo	derate se	ismicity
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	(	2			NA for	LS in mo	derate se	ismicity
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	(	C			NA for	LS in mo	derate se	ismicity
4 8.2.1	Basic	Ceilings	SUPPORT	(	C				(	2	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	(				NA for	LS in mo	derate se	ismicity
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	(				NA for	LS in mo	derate se	ismicity
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	(	С	(			(	2	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	(	C	(		NA for	LS in mo		ismicity
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	(	С	(		NA for	LS in mo	derate se	ismicity
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	(				NA for	LS in mo	derate se	ismicity
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	(	С				(	2	· ·
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	(	С				(	3	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	(	С				N	Α	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	(	C					2	
4 8.4.6	Basic	Cladding & glazing	INSERTS	(	C					2	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	(	C				(	2	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	(	C			NA for	LS in mo	derate se	ismicity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	(	C			NA for	LS in mo	derate se	ismicity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	(	C				(	3	
4 8.5 2	Basic	Masonry Veneer	TIES	(	C				(	3	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	(	C				(	3	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	(	C			NA for	LS in mo	derate se	ismicity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	(	,			NA for	LS in mo	derate se	ismicity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	(	,			NA for	LS in mo	derate se	ismicity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	(	C			NA for	LS in mo	derate se	ismicity
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	(	1			NA for	LS in mo	derate se	ismicity
4 8.8.1	Basic	Appendages	URM PARAPETS	(	•					Α	
4 8.8 2	Basic	Appendages	CANOPIES	(	,					Α	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	(	1				LS in mo		
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	(					LS in mo		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	(				NA for	LS in mo		ismicity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	(	C					Α	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	(	,			NA for	LS in mo		ismicity
4 8.10.2	Basic	Stairs	STAIR DETAILS	(						Α	
4 8.10.1	Basic	Stairs	URM WALLS	(						IC	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	(					LS in mo		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	(		(		NA for	LS in mo		ismicity
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	(				ļ		IC	
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	(	C	(				3	





Nonstructural Recovery Sub-rating													
ASCE 31 Tier 2				Co	mpliance Safety s	Required ub-Rating							
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U		
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C	(				ĪΑ	•		
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	(			1	۱C			
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C	(		NA	NA for LS in moderate seismicit				
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C				NA	NA for LS in moderate seismicit				
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	(		C	NC				
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	(		C	ı	NC .			
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	C	(		C NA	NA for LS in moderate seismicit				
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	C	(		C NA	or LS in mo	derate se	ismicity		
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C			NA	or LS in mo	derate se	ismicity		
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	(		C	ı	۱A			
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	(		C NA	or LS in mo	derate se	ismicity		
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	(		NA:	or LS in mo	derate se	ismicity		
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	C	(		NA:	or LS in mo	derate se	ismicity		
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.7	Supplemental	Elevators	BRACKETS	C	С	(		NA	or LS in mo	derate se	ismicity		
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C	(		NA	or LS in mo	derate se	ismicity		
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C	С	(		NA	NA for LS in moderate seismicity				

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





bullullig.	300018	J. BRATTON DAVIS OS BRRECT		e Shear Walls-Stiff Diaphragms)								
ASCE 31 Tier 2			C2 (CONCIEN	c Silvar vvans-Still Diaphilagnisj	Co	mpliance Safety s	Required ub-Rating					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	C	С	. (	C			С	
4.3.1.3	Basic	Building System	General	MEZZANINES	C	С	. (				NA	
4.3.2.1	Basic	Building System	Configuration	WEAK STORY	C	C	. (	C			С	
4.3.2.2	Basic	Building System	Configuration	SOFT STORY	C	C	. (	C			С	
4.3.2.3	Basic	Building System	Configuration	GEOMETRY	C	C	. (	C			С	
4.3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	C	C	. (	C			NC	
4.3.2.5	Basic	Building System	Configuration	MASS	C	C	. (	C			С	
4.3.2.6	Basic	Building System	Configuration	TORSION	C	C	. (	C			NC	
4.3.3.5	Basic	Building System	Condition of Materials	POST-TENSIONING ANCHORS	C	C	(				NA	
4.4.1.6.1	Basic	Lateral Force Resisting System	Moment Frames	COMPLETE FRAMES	C	C	. (				С	
4.4.2.1.1	Basic	Lateral Force Resisting System	Shear Walls	REDUNDANCY, shear walls	C	C	(				NC	
4.4.2.2.1	Basic	Lateral Force Resisting System	Shear Walls	SHEAR STRESS CHECK, concrete walls	C	C	(	C			NC	
4.4.2.2 2	Basic	Lateral Force Resisting System	Shear Walls	REINFORCING STEEL, non-tilt-up concrete walls	C	C	. (	C			С	
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (LS)	C	C	(	C			С	
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (IO)	C				NA fo	r LS in mo	oderate se	ismicity
4.6.3.5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (LS)	C	C	(	C			С	
4.6.3.5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (IO)	C				NA fo	r LS in mo	oderate se	ismicity
4.4.1.6 2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (LS)	C	C	(		NA fo	r LS in mo	oderate se	ismicity
4.4.1.6 2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (IO)	C				NA fo	r LS in mo	oderate se	ismicity
4.4.1.6 3	Supplemental	Lateral Force Resisting System	Moment Frames	FLAT SLABS	C	C	(	C	NA fo	r LS in mo	oderate se	ismicity
4.4.2.2 3	Supplemental	Lateral Force Resisting System	Shear Walls	COUPLING BEAMS (LS)	C	C	(		NA fo	r LS in mo	oderate se	ismicity
4.4.2.2 3	Supplemental	Lateral Force Resisting System	Shear Walls	COUPLING BEAMS (IO)	C				NA fo	r LS in mo	oderate se	ismicity
4.4.2.2.4	Supplemental	Lateral Force Resisting System	Shear Walls	OVERTURNING, concrete shear walls	C				NA fo	r LS in mo	oderate se	ismicity
4.4.2.2 5	Supplemental	Lateral Force Resisting System	Shear Walls	CONFINEMENT REINFORCING	C				NA fo	r LS in mo	oderate se	ismicity
4.4.2.2.6	Supplemental	Lateral Force Resisting System	Shear Walls	REINFORCING AT OPENINGS, concrete walls	C				NA fo	r LS in mo	oderate se	ismicity
4.4.2.2.7	Supplemental	Lateral Force Resisting System	Shear Walls	WALL THICKNESS, cast-in-place concrete	C				NA fo	r LS in mo	oderate se	ismicity
4.5.1.1	Supplemental	Diaphragms	General	DIAPHRAGM CONTINUITY	C	C	(	C	NA fo	r LS in mo	oderate se	ismicity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (LS)	C	C	(		NA fo	r LS in mo	oderate se	ismicity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (IO)	C				NA fo	r LS in mo	oderate se	ismicity
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	С				NA fo	r LS in mo	oderate se	ismicity
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	C				NA fo	r LS in mo	oderate se	ismicity
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	С	C	(		NA fo	r LS in mo	oderate se	ismicity
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	C				NA fo	r LS in mo	oderate se	ismicity

Note: C=Compliance required for the safety sub-rating shown





		Ge	ologic Site Hazards and Foundations								
ASCE 31 Tier 2				Co	•	Required ub-Rating					
Section	Checklist	Heading	ltem	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	C	C	С			С	
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	C	C				С	
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	C	C	С			С	
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	C	C	С			NA	
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	C	C		NA fo	r LS in m	oderate s	eismicity
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	C	C				NA	
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C						NA	
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C						NA	

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building:	20018	J. BRATTON DAVIS US BRRPCY	Nonstructural Safety Sub-ra	ting								
ASCE 31 Tier 2				Co		Required ub-Rating	for					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U	
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	C	C			ľ	NC .		
4 8.1 2	Supplemental	Partitions	DRIFT	С	C			NA for	LS in mo	derate se	ismicity	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С				NA for	LS in mo	derate se	ismicity	
4 8.1.4	Supplemental	Partitions	TOPS	С				NA for	LS in mo	derate se	ismicity	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С	C	C		NA for	LS in mo	derate se	ismicity	
4 8.2.1	Basic	Ceilings	SUPPORT	С	C					С		
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С	C	2		NA for	LS in mo	derate se	ismicity	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С	C			NA for LS in moderate seismicity			ismicity	
4 8.2 5	Supplemental	Ceilings	EDGES	С				NA for	LS in mo	derate se	ismicity	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С				NA for LS in moderate seismicity				
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С	C			NA for	LS in mo	derate se	ismicity	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С	C					С		
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С				NA for	LS in mo	derate se	ismicity	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С				NA for LS in moderate seismi				
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	C	C				С		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	C	C			1	۱A		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С	C	C				۱A		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	C	_			1	۱A		
4 8.4.6	Basic	Cladding & glazing	INSERTS	С	C	_				۱A		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	C	C			1	۱A		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С	C	C		NA for	LS in mo	derate se	ismicity	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	C			NA for	LS in mo	derate se	ismicity	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	C					۱A		
4 8.5 2	Basic	Masonry Veneer	TIES	С	C				1	۱A		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С	C	C			1	۱A		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	С	C					derate se		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С	C			NA for	LS in mo	derate se	ismicity	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С	C			NA for	LS in mo	derate se	ismicity	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	C	2		NA for	LS in mo	derate se	ismicity	
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	C			NA for	LS in mo	derate se	ismicity	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С				NA for	LS in mo	derate se	ismicity	
4 8.8.1	Basic	Appendages	URM PARAPETS	С	C	C			1	۱A		
4 8.8 2	Basic	Appendages	CANOPIES	С	C	_			1	۱A		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	C					derate se		
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С	C	C				derate se		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С				NA for		derate se	ismicity	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С	C	_				۱A		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С	C			NA for		derate se	ismicity	
4 8.10.1	Basic	Stairs	URM WALLS	С	C	_			ľ	IC .		
4 8.10.2	Basic	Stairs	STAIR DETAILS	С	C					۱A		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С	C	C			1	IC .		
4 8.11.2	Supplemental	Contents	FILE CABINETS	С	C					derate se		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	C			NA for	LS in mo	derate se	ismicity	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С				NA for	LS in mo	derate se	ismicity	
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С	C	C			ľ	IC .		





Dunuing.			Nonstructural Safety Sub-rati	ng									
ASCE 31 Tier 2						ub-Rating							
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U		
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT		C C	(				VC			
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	(	C	(				NA			
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	(	C					derate se			
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	(				NA for	LS in mo	derate se	ismicity		
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	(				NA for	LS in mo	derate se	ismicity		
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	(				NA for	NA for LS in moderate seismici				
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	(	C		С				
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	(	C	(			С				
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	(				NA for	LS in mo	derate se	ismicity		
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	(				NA for	LS in mo	derate se	ismicity		
4 8.13.5	Supplemental	Piping	C-CLAMPS	(				NA for	LS in mo	derate se	ismicity		
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	(	C	(		NA for	LS in mo	derate se	ismicity		
4 8.14.2	Supplemental	Ducts	DUCT BRACING	(				NA for	LS in mo	derate se	ismicity		
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	(				NA for	LS in mo	derate se	ismicity		
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	(	C	(	C	NA for	LS in mo	derate se	ismicity		
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	(	C	(			١	۱A			
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	(	C	(		NA for	LS in mo	derate se	ismicity		
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	(				NA for	LS in mo	derate se	ismicity		
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(				NA for	LS in mo	derate se	ismicity		
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	(				NA for	LS in mo	derate se	ismicity		
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	(				NA for	LS in mo	derate se	ismicity		
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	(				NA for	LS in mo	derate se	ismicity		
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	(				NA for	LS in mo	derate se	ismicity		
4 8.16.7	Supplemental	Elevators	BRACKETS	(				NA for	LS in mo	derate se	ismicity		
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	(				NA for	LS in mo	derate se	ismicity		
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	(				NA for	LS in mo	derate se	ismicity		

Note: C=Compliance required for the nonstructural safety sub-rating shown.





Building:	SC0018	J. BRATTON DAVIS US BRRPCY	Nonstructural Recovery Sub-	rating								
ASCE 31 Tier 2				Co	ompliance Safety s	Required ub-Rating						
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U	
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	(	C					VC		
4 8.1 2	Supplemental	Partitions	DRIFT	(	C					derate se		
4 8.1.4	Supplemental	Partitions	TOPS	(	C			NA for	LS in mo	derate se	ismicity	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	(	1			NA for	LS in mo	derate se	ismicity	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	(	C			NA for	LS in mo	derate se	ismicity	
4 8.2.1	Basic	Ceilings	SUPPORT	(						С		
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	(				NA for	LS in mo	derate se	ismicity	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	(				NA for	LS in mo	derate se	ismicity	
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	(	C	C				С		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	(	С	C		NA for	LS in mo	derate se	ismicity	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	(	С	C		NA for	LS in mo	derate se	ismicity	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	(				NA for	LS in mo	derate se	ismicity	
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	(	C					С		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	(	С				1	NA		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	(	C				1	NA		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	(	C							
4 8.4.6	Basic	Cladding & glazing	INSERTS	(	C				NA NA			
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	(	C				1	NΑ		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	(	C			NA for	LS in mo	derate se	ismicity	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	(	C			NA for	LS in mo	derate se	ismicity	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	(	C				1	NΑ		
4 8.5 2	Basic	Masonry Veneer	TIES	(	C				1	NΑ		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	(	C				1	NΑ		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	(	C			NA for	LS in mo	derate se	ismicity	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	(	,			NA for	LS in mo	derate se	ismicity	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	(	C			NA for	LS in mo	derate se	ismicity	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	(	C			NA for	LS in mo	derate se	ismicity	
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	(	C			NA for	LS in mo	derate se	ismicity	
4 8.8.1	Basic	Appendages	URM PARAPETS	(	C				1	NA		
4 8.8 2	Basic	Appendages	CANOPIES	(	Ò				1	NΑ		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	(	C					derate se		
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	(						derate se		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	(			ļ	NA for		derate se	ismicity	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	(						NΑ		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	(				NA for	LS in mo	derate se	ismicity	
4 8.10.2	Basic	Stairs	STAIR DETAILS	(	C					AV		
4 8.10.1	Basic	Stairs	URM WALLS	(	C					VC		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	(	C					derate se		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	(	· ·	C		NA for		derate se	ismicity	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	(			ļ			VC		
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity	
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	(				NA for	LS in mo	derate se	ismicity	
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	(	С	C	:			VC	•	





Nonstructural Recovery Sub-rating														
ASCE 31 Tier 2			,		mpliance Safety s	Required ub-Rating								
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U			
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C		С			NC	•			
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	С	C		С			NA				
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	С	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	. C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C		С	NA fo	NA for LS in moderate seismicity					
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C				NA fo	NA for LS in moderate seismicity					
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C		C (		С					
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C		C (			С				
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	C		C (	NA fo	or LS in mo	derate se	ismicity			
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	C		C (	NA fo	or LS in mo	derate se	ismicity			
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C			NA fo	or LS in mo	derate se	ismicity			
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	. C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C		C (			NA				
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C		C (	NA fo	or LS in mo	derate se	ismicity			
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	С	C		C (	NA fo	or LS in mo	derate se	ismicity			
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	. C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.7	Supplemental	Elevators	BRACKETS	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C		С	NA fo	or LS in mo	derate se	ismicity			
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	С	C		С	NA fo	or LS in mo	derate se	ismicity			

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





Building:	CO0039	BYRON G.ROGERS COURTHC		Moment Frames - Stiff Diaphragms)								
			SI (Steel	woment Frames - Stiff Diaphragms)	1				ı	1	T	ı
ASCE 31					Co	•	Required					
Tier 2						Safety s	ub-Rating		ļ			
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	(		(	C			С	
4.3.1.2	Basic	Building System	General	ADJACENT BUILDINGS	(		(		1	NA for LS i	n low seis	micity
4.3.1.3	Basic	Building System	General	MEZZANINES	(		(		1	NA for LS i	n low seis	micity
4.3.2.1	Basic	Building System	Configuration	WEAK STORY	(			C			n low seis	
4.3.2.2	Basic	Building System	Configuration	SOFT STORY	(			C	1	NA for LS i	n low seis	micity
4.3.2.3	Basic	Building System	Configuration	GEOMETRY	(			C	1	NA for LS i	n low seis	micity
4.3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	(		(	C	1	NA for LS i	n low seis	micity
4.3.2.5	Basic	Building System	Configuration	MASS	(			С	1	NA for LS i	n low seis	micity
4.3.2.6	Basic	Building System	Configuration	TORSION	(		(	C	1	NA for LS i	n low seis	micity
4.4.1.1.1	Basic	Lateral Force Resisting System	Moment Frames	REDUNDANCY, moment frames (LS)	(		(		1	NA for LS i	n low seis	micity
4.4.1.1.1	Basic	Lateral Force Resisting System	Moment Frames	REDUNDANCY, moment frames (IO)	(	,			1	NA for LS i	n low seis	micity
4.4.1.2.1	Basic	Lateral Force Resisting System	Moment Frames	INTERFERING WALLS	(		(		1	NA for LS i	n low seis	micity
4.4.1.3.1	Basic	Lateral Force Resisting System	Moment Frames	DRIFT CHECK (LS)	(		(		1	NA for LS i	n low seis	micity
4.4.1.3.1	Basic	Lateral Force Resisting System	Moment Frames	DRIFT CHECK (IO)	(	,			1	NA for LS i	n low seis	micity
4.4.1.3.2	Basic	Lateral Force Resisting System	Moment Frames	AXIAL STRESS CHECK, steel columns	(		(	C	1	NA for LS i	n low seis	micity
4.6.2.2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (LS)	(		(	C	1	NA for LS i	n low seis	micity
4.6.2.2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (IO)	(				1	NA for LS i	n low seis	micity
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (LS)	(		(	C	1	NA for LS i	n low seis	micity
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (IO)	(				1	NA for LS i	n low seis	micity
4.4.1.3.3	Supplemental	Lateral Force Resisting System	Moment Frames	MOMENT-RESISTING CONNECTIONS	(		(		1	NA for LS i	n low seis	micity
4.4.1.3.4	Supplemental	Lateral Force Resisting System	Moment Frames	PANEL ZONES	(		(		1	NA for LS i	n low seis	micity
4.4.1.3.5	Supplemental	Lateral Force Resisting System	Moment Frames	COLUMN SPLICES, steel moment frames (LS)	(			C	1	NA for LS i	n low seis	micity
4.4.1.3.5	Supplemental	Lateral Force Resisting System	Moment Frames	COLUMN SPLICES, steel moment frames (IO)	(				1	NA for LS i	n low seis	micity
4.4.1.3.6	Supplemental	Lateral Force Resisting System	Moment Frames	STRONG COLUMN/WEAK BEAM, stee	(				1	NA for LS i	n low seis	micity
4.4.1.3.7	Supplemental	Lateral Force Resisting System	Moment Frames	COMPACT MEMBERS	(				1	NA for LS i	n low seis	micity
4.4.1.3.8	Supplemental	Lateral Force Resisting System	Moment Frames	BEAM PENETRATIONS	(				1	NA for LS i	n low seis	micity
4.4.1.3.9	Supplemental	Lateral Force Resisting System	Moment Frames	GIRDER FLANGE CONTINUITY PLATES	(	,			1	NA for LS i	n low seis	micity
4.4.1.3.10	Supplemental	Lateral Force Resisting System	Moment Frames	OUT-OF-PLANE BRACING, steel moment frames	(				1	NA for LS i	n low seis	micity
4.4.1.3.11	Supplemental	Lateral Force Resisting System	Moment Frames	BOTTOM FLANGE BRACING	(				1	NA for LS i	n low seis	micity
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	(				1	NA for LS i	n low seis	micity
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	(				1	NA for LS i	n low seis	micity
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	(				1	NA for LS i	n low seis	micity
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	(				1	NA for LS i	n low seis	micity

Note: C=Compliance required for the safety sub-rating shown





			Geologic Site Hazards and Foundations								
ASCE 31 Tier 2				Co	•	Required ub-Rating					
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	0			C	NA	for LS in	low seismi	icity
4.7.1.2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	0				NA	for LS in	low seismi	icity
4.7.1.3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE				C	NA	for LS in	low seismi	icity
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	(			C	NA	for LS in	low seismi	icity
4.7.3.2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C				NA	for LS in	low seismi	icity
4.7.3.3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C				NA	for LS in	low seismi	icity
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C				NA	for LS in	low seismi	icity
4.7.3.5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C				NA	for LS in	low seismi	icity

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





			Nonstructural Safety Sub-ra	ating							
ASCE 31 Tier 2				Co	•	Required ub-Rating	for				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	C	C		NA	for LS in lo	ow seismi	city
4 8.1 2	Supplemental	Partitions	DRIFT		C			NA	for LS in lo	ow seismi	city
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C				NA	for LS in lo	ow seismi	city
4 8.1.4	Supplemental	Partitions	TOPS	C				NA	for LS in lo	ow seismi	city
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	C	C		NA	for LS in lo	ow seismi	city
4 8.2.1	Basic	Ceilings	SUPPORT		C			NA	for LS in lo	ow seismi	city
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES		C			NA	for LS in lo	ow seismi	city
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS		C			NA	for LS in lo	ow seismi	city
4 8.2 5	Supplemental	Ceilings	EDGES					NA	for LS in lo	ow seismi	city
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT					NA	for LS in lo	ow seismi	city
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT		C	C		NA	for LS in lo	ow seismi	city
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C	C				(	:	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C				NA	for LS in lo	ow seismi	city
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C				NA	for LS in lo	ow seismi	city
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	C	C			(	;	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION		C	C		NA	for LS in lo	ow seismi	city
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS		C	C		NA	for LS in lo	ow seismi	city
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS		C	C		NA	for LS in lo	ow seismi	city
4 8.4.6	Basic	Cladding & glazing	INSERTS		C	C		NA	for LS in lo	ow seismi	city
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS		C	С		NA	for LS in lo	ow seismi	city
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING		C	С		NA	for LS in lo	ow seismi	city
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT		C				(	:	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)		C	C		NA	for LS in lo	ow seismi	city
4 8.5 2	Basic	Masonry Veneer	TIES		C	С		NA	for LS in lo	ow seismi	city
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES		C	С		NA	for LS in lo	ow seismi	city
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C	C			NA	for LS in lo	w seismi	city
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	(	С			NA	for LS in lo	w seismi	city
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	(	С				for LS in lo		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	С				for LS in lo		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C			NA	for LS in lo	w seismi	city
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	(					for LS in lo		
4 8.8.1	Basic	Appendages	URM PARAPETS	(	С	С			N/		
4 8.8 2	Basic	Appendages	CANOPIES	C	C	С			(		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C	C	C		NA	for LS in lo		city
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	C	C			for LS in lo		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C					for LS in lo		
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	(	С	С			for LS in lo		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE		C	C			for LS in Id		
4 8.10.1	Basic	Stairs	URM WALLS	C					N		
4 8.10.2	Basic	Stairs	STAIR DETAILS					NA	for LS in lo		citv
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS			C			for LS in Id		
4 8.11.2	Supplemental	Contents	FILE CABINETS						for LS in Id		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS						for LS in Id		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS						for LS in lo		
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER			C		11/2	(		,





			Nonstructural Safety Sub-ra	ting							
ASCE 31 Tier 2					mpliance Safety s	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C	C			NA for LS in I	ow seismic	ity
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	C			NA for LS in I	ow seismic	ity
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C	C				NA for LS in I	ow seismic	ity
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C					NA for LS in I	ow seismic	ity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C					NA for LS in I	ow seismic	ity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C					NA for LS in I	ow seismic	ity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	C	(	С	NA for LS in I	ow seismic	ity
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	C			NA for LS in I	ow seismic	ity
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	C					NA for LS in I	ow seismic	ity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C					NA for LS in I	ow seismic	ity
4 8.13.5	Supplemental	Piping	C-CLAMPS	C					NA for LS in I	ow seismic	ity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C	C			NA for LS in I	ow seismic	ity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C					NA for LS in I	ow seismic	ity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C					NA for LS in I	ow seismic	ity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	C	)	С	NA for LS in I	ow seismic	ity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	C			NA for LS in I	ow seismic	ity
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	C			NA for LS in I	ow seismic	ity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C					NA for LS in I	ow seismic	ity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(					NA for LS in I	ow seismic	ity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C					NA for LS in I	ow seismic	ity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS						NA for LS in I	ow seismic	city
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C					NA for LS in I	ow seismic	city
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C					NA for LS in I	ow seismic	ity
4 8.16.7	Supplemental	Elevators	BRACKETS	C					NA for LS in I	ow seismic	ity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C					NA for LS in I	ow seismic	ity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C					NA for LS in I	ow seismic	ity

Note: C=Compliance required for the nonstructural safety sub-rating shown.





			Nonstructural Recovery Sub-ra	ating							
ASCE 31 Tier 2				Со	-	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	С			NA	for LS in lo	w seism	icity
4 8.1 2	Supplemental	Partitions	DRIFT	С	С			NA	for LS in lo	w seism	icity
4 8.1.4	Supplemental	Partitions	TOPS	С	С			NA	for LS in lo	w seism	icity
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C				NA	for LS in lo	w seism	icity
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С	С			NA	for LS in lo	w seism	icity
4 8.2.1	Basic	Ceilings	SUPPORT	С	С			NA	for LS in lo	w seism	icity
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C				NA	for LS in lo	w seism	icity
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С				NA	for LS in lo	w seism	icity
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	С				NA	for LS in lo	w seism	icity
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	С				NA	for LS in Io	w seism	icitv
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С	С	C			C		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C				NA	for LS in lo	w seism	icitv
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C					for LS in lo		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С		_			for LS in Io		
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C							
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C				NA	for LS in Io		icitv
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С					for LS in Io		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С					for LS in Io		
4 8.4.6	Basic	Cladding & glazing	INSERTS	С	С				for LS in lo		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	С			NA	for LS in lo	w seism	icity
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С	С			NA	for LS in lo	w seism	icity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	С				C		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	С			NA	for LS in lo	w seism	icity
4 8.5 2	Basic	Masonry Veneer	TIES	С	С				for LS in Io		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С	С			NA	for LS in Io	w seism	icity
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С	С			NA	for LS in lo	w seism	icity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С	С			NA	for LS in Io	w seism	icity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С	С			NA	for LS in lo	w seism	icity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	С				for LS in lo		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	С			NA	for LS in Io	w seism	icity
4 8.8.1	Basic	Appendages	URM PARAPETS	С	С				N/	١	
4 8.8 2	Basic	Appendages	CANOPIES	С	С				C		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	С			NA	for LS in Io	w seism	icity
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С	С			NA	for LS in lo	w seism	icity
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С	С				for LS in lo		
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С	С			NA	for LS in lo	w seism	icity
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С	С			NA	for LS in lo	w seism	icity
4 8.10.2	Basic	Stairs	STAIR DETAILS	С	С	C		NA	for LS in lo	w seism	icity
4 8.10.1	Basic	Stairs	URM WALLS	С	С				N	С	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С	С	C		NA	for LS in lo	w seism	icity
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	С	С	:		for LS in lo		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С					for LS in lo		
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	С				NA	for LS in lo	w seism	icity
							1				
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	С				NΙΛ	for LS in Io	w spicm	icity





Nonstructural Recovery Sub-rating											
ASCE 31 Tier 2				Compliance Required for Safety sub-Rating			-				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C		(		NA for LS in low seismicity			icity
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C				NA	for LS in l	ow seism	icity
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C		(		NA	for LS in l	ow seism	icity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C		(		NA	for LS in l	ow seism	icity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C				NA	for LS in I	ow seism	icity
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C				NA	for LS in I	ow seism	icity
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C				NA	for LS in I	ow seism	icity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C		(	C	NA	for LS in l	ow seism	icity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C		(	C	NA	for LS in l	ow seism	icity
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C			C	NA	for LS in I	ow seism	icity
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C				NA	for LS in I	ow seism	icity
4 8.13.5	Supplemental	Piping	C-CLAMPS	C				NA	for LS in I	ow seism	icity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C		(		NA	for LS in I	ow seism	icity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C				NA	for LS in I	ow seism	icity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C		(		NA	for LS in I	ow seism	icity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C		(	C	NA	for LS in I	ow seism	icity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C			C	NA	for LS in I	ow seism	icity
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C				NA	for LS in I	ow seism	icity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C		(		NA	for LS in I	ow seism	icity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C		(		NA	for LS in I	ow seism	icity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C		(		NA	for LS in I	ow seism	icity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C		(		NA	for LS in l	ow seism	icity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C		(		NA	for LS in l	ow seism	icity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C		(		NA	for LS in l	ow seism	icity
4 8.16.7	Supplemental	Elevators	BRACKETS	C				NA	for LS in l	ow seism	icity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C		(		NA	for LS in l	ow seism	icity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C		(		NA	for LS in I	ow seism	icity

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





Building: UT0042 FB

bullaing:	010042	гв	DM1 /Poinforced	Maconny Pooring Walls Flovible Dionhyagus								
	1		KIVIT (KeInforced	Masonry Bearing Walls-Flexible Diaphragms)						1		
ASCE 31					Co	Compliance Required for						
Tier 2						Safety sub-Rating						
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	С	Ī	0	C			С	
4.3.1.2	Basic	Building System	General	ADJACENT BUILDINGS	С	Ī	0 0				С	
4.3.1.3	Basic	Building System	General	MEZZANINES	С		c c			1	ΙA	
4.3.2.1	Basic	Building System	Configuration	WEAK STORY	С	Ī	C C	C			ΙA	
4.3.2.2	Basic	Building System	Configuration	SOFT STORY	С	Ī	0	C		1	ΙA	
4.3.2.3	Basic	Building System	Configuration	GEOMETRY	С	Ī	0 0	C			С	
4.3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	С	Ū	C C	C		1	ΙA	
4.3.2.5	Basic	Building System	Configuration	MASS	С	Ī	C C	C		1	ΙA	
4.4.2.1.1	Basic	Lateral Force Resisting System	Shear Walls	REDUNDANCY, shear walls	С		c c				С	
4.4.2.4.1	Basic	Lateral Force Resisting System	Shear Walls	SHEAR STRESS CHECK, reinforced masonry walls	С	•	C C	C			С	
4.4.2.4.2	Basic	Lateral Force Resisting System	Shear Walls	REINFORCING STEEL, reinforced masonry	С		C C				С	
4.6.1.1	Basic	Connections	Anchorage for Normal Forces	WALL ANCHORAGE	С		C C	C			С	
4.6.1.2	Basic	Connections	Anchorage for Normal Forces	WOOD LEDGERS	С		C C	C		1	ΙA	
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (LS)	С	•	C C	C			С	
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (IO)	С					NA	or LS	
4.6.3.5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (LS)	С	(	C C	C			С	
4.6.3.5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (IO)	С					NA	or LS	
4.6.4.1	Basic	Connections	Interconnection of Elements	GIRDER/COLUMN CONNECTION	С		C C	C			С	
4.4.2.4.3	Supplemental	Lateral Force Resisting System	Shear Walls	REINFORCING AT OPENINGS, masonry walls	С				N/	A for mode	rate seismi	icity
4.4.2.4.4	Supplemental	Lateral Force Resisting System	Shear Walls	PROPORTIONS, reinforced masonry	С		C C		N/	A for mode	rate seismi	icity
4.5.1.2	Supplemental	Diaphragms	General	CROSS TIES	С		C C	C	N/	A for mode	rate seismi	icity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (LS)	С	(	C C		N/	A for mode	rate seismi	icity
4.5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (IO)	С				N/	A for mode	rate seismi	icity
4.5.1.6	Supplemental	Diaphragms	General	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS (LS)	С	(	C C		N/	A for mode	rate seismi	icity
4.5.1.6	Supplemental	Diaphragms	General	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS (IO)	С				N/	A for mode	rate seismi	icity
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	С				N/	A for mode	rate seismi	icity
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	С				N/	A for mode	rate seismi	icity
4.5.2.1	Supplemental	Diaphragms	Wood Diaphragms	STRAIGHT SHEATHING (LS)	С		C C	C	N/	A for mode	rate seismi	icity
4.5.2.1	Supplemental	Diaphragms	Wood Diaphragms	STRAIGHT SHEATHING (IO)	С				N/	for mode	rate seismi	icity
4.5.2.2	Supplemental	Diaphragms	Wood Diaphragms	SPANS (LS)	С		C C	С	N/	A for mode	rate seismi	icity
4.5.2.2	Supplemental	Diaphragms	Wood Diaphragms	SPANS (IO)	С				N/	for mode	rate seismi	icity
4.5.2.3	Supplemental	Diaphragms	Wood Diaphragms	UNBLOCKED DIAPHRAGMS (LS)	С		C C	С	N/	for mode	rate seismi	icity
4.5.2.3	Supplemental	Diaphragms	Wood Diaphragms	UNBLOCKED DIAPHRAGMS (IO)	С				N/	A for mode	rate seismi	icity
4.5.3.1	Supplemental	Diaphragms	Metal Deck Diaphragms	NON-CONCRETE FILLED DIAPHRAGMS	С				N/	for mode	rate seismi	icity
4.5.7.1	Supplemental	Diaphragms	Other Diaphragms	OTHER DIAPHRAGMS	С		C C	C	N/	for mode	rate seismi	icity
4.6.1.4	Supplemental	Connections	Anchorage for Normal Forces	STIFFNESS OF WALL ANCHORS	С	(	C C		N/	A for mode	rate seismi	icity

Note: C=Compliance required for the safety sub-rating shown





Building: UT0042 FB

Geologic Site Hazards and Foundations												
ASCE 31 Tier 2					-	Required ub-Rating						
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U	
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C			C		С			
4.7.1.2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C					С			
4.7.1.3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C			C	С				
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C			C	NA				
4.7.3.2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	. (			NA for LS in moderate seismicity			icity	
4.7.3.3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	. (			NA for LS in moderate seismicity			icity	
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C				NA				
4.7.3.5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C				NA for LS in moderate seismicit			icity	

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building: UT0042 FB

Building:	010042	FB	Nonstructural Safety Su	b-rating							
ASCE 31 Tier 2			,		•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	C					NA	
4 8.1 2	Supplemental	Partitions	DRIFT	C	C			1	NA for LS in	moderate	seismicity
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C				1	NA for LS in	moderate	seismicity
4 8.1.4	Supplemental	Partitions	TOPS	C				1	NA for LS in	moderate	seismicity
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	C			1	NA for LS in	moderate	seismicity
4 8.2.1	Basic	Ceilings	SUPPORT	C	C			NC			
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C	C			1	NA for LS in	moderate	seismicity
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C	C			1	NA for LS in	moderate	seismicity
4 8.2 5	Supplemental	Ceilings	EDGES	C				1	NA for LS in	moderate	seismicity
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	C				1	NA for LS in	moderate	seismicity
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C	C			1	NA for LS in	moderate	seismicity
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C						NC	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C				1	NA for LS in	moderate	seismicity
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C				1	NA for LS in	moderate	seismicity
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	C					NA	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C	C					NA	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C						NA	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	C	C				NA	
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	C					NA	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C	C					NA	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C	C			1	NA for LS in	moderate	seismicity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	C			1	NA for LS in	moderate	seismicity
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C	C					NA	
4 8.5 2	Basic	Masonry Veneer	TIES	C						NA	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	C	C				NA	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C	C					NA	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C				1	NA for LS in	moderate	seismicity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	C			1	NA for LS in	moderate	seismicity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	C			1	NA for LS in	moderate	seismicity
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C			1	NA for LS in	moderate	seismicity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C				1	NA for LS in	moderate	seismicity
4 8.8.1	Basic	Appendages	URM PARAPETS	C	C	C				NA	
4 8.8 2	Basic	Appendages	CANOPIES	C	C					С	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C				1	NA for LS in	moderate	seismicity
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C						moderate	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C				1	NA for LS in	moderate	seismicity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C						NA	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C	C			1	NA for LS in	moderate	seismicity
4 8.10.1	Basic	Stairs	URM WALLS	C	C					NA	
4 8.10.2	Basic	Stairs	STAIR DETAILS	C						NA	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C	C					NC	
4 8.11.2	Supplemental	Contents	FILE CABINETS	C				1	NA for LS in	moderate	seismicity
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C	C					moderate	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C				1	NA for LS in	moderate	seismicity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С	C					NA	





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			Nonstructural Safety Sub-	rating								
ASCE 31 Tier 2					Safety	e Require sub-Ratir	ıg					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Sta	ar	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	(		С	С				NA	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	(		С	С				NC	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	(	0	С					moderate	,
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	(					N	A for LS ir	n moderate	seismicity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	(					N	A for LS ir	moderate	seismicity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	(					N	A for LS ir	moderate	seismicity
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	(		С	C	С			NA	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	(		С	C				NA	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	(					N	A for LS ir	n moderate	seismicity
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	(					N	A for LS ir	n moderate	seismicity
4 8.13.5	Supplemental	Piping	C-CLAMPS	(					N	A for LS ir	moderate	seismicity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	(		С	С		N	A for LS ir	moderate	seismicity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	(					N	A for LS ir	moderate	seismicity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	(					N	A for LS ir	moderate	seismicity
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	(		С	С	С	N	A for LS ir	moderate	seismicity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	(		С	С				NA	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	(		С	С		N	A for LS ir	moderate	seismicity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	(					N	A for LS ir	moderate	seismicity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(					N	A for LS ir	moderate	seismicity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	(					N	A for LS ir	moderate	seismicity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	(					N	A for LS ir	moderate	seismicity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	(					N	A for LS ir	moderate	seismicity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	(					N	A for LS ir	moderate	seismicity
4 8.16.7	Supplemental	Elevators	BRACKETS	(					NA for LS in moderate seismicity			
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	(					NA for LS in moderate seismicity			
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	(					N	A for LS ir	moderate	seismicity

Note: C=Compliance required for the nonstructural safety sub-rating shown.



R+C www.

Building: UT0042 FB

Building:	UT0042	FB	Nonstructural Recovery Su	h rating							
			Nonstructural Recovery 3u					l	I		1
ASCE 31				Со	mpliance	Required ub-Rating					
Tier 2	Ch a aldiat	Name to well the state of the state of	lt aus	r chan		3-Star			NC	81.6	U
Section 4 8.1.1	Checklist Basic	Nonstructural Checklist Section Partitions	UNREINFORCED MASONRY	5-Star			2-Star	С	NC NA	NA	U
4 8.1.1	Supplemental	Partitions	DRIFT	0				NA for I	S in mode	rata caicn	nicity
4 8.1.4	Supplemental	Partitions	TOPS		C				S in mode		
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS						S in mode		
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER		С				S in mode		
4 8.2.1	Basic	Ceilings	SUPPORT	C				1011011	NC	. 410 50.51	e.cy
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C				NA for I	S in mode	rate seisn	nicity
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C					S in mode		
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	C					S in mode		•
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>						S in mode		
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING				^	IVATOTI	NC	rate seisii	ПСПСУ
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	0	_			NA for I	S in mode	rata caicn	nicity
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS						S in mode		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS			,			S in mode		
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS					TVA TOT I	NA NA	rate seisii	licity
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION						NA NA		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C					NA		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS		C				NA		
4 8.4.6	Basic	Cladding & glazing	INSERTS		C				NA		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS		C				NA		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING		C			NA for I	S in mode	rate seisn	nicity
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	C				S in mode		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C	С			-	NA		
4 8.5 2	Basic	Masonry Veneer	TIES	C	C				NA		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	С				NA		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C	С			NA for I	S in mode	rate seisn	nicity
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	С			NA for I	S in mode	rate seisn	nicity
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C	С			NA for I	S in mode	rate seisn	nicity
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	C			NA for I	S in mode	rate seisn	nicity
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C			NA for I	S in mode	rate seisn	nicity
4 8.8.1	Basic	Appendages	URM PARAPETS	C	C				NA		
4 8.8 2	Basic	Appendages	CANOPIES	C	C				С		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C	C			NA for I	S in mode	rate seisn	nicity
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	С			NA for I	S in mode	rate seisn	nicity
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C				NA for I	S in mode	rate seisn	nicity
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C	С				NA		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C				NA for I	S in mode	rate seisn	nicity
4 8.10.2	Basic	Stairs	STAIR DETAILS	C			C		NA		
4 8.10.1	Basic	Stairs	URM WALLS	C					NA		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C					S in mode		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C		(	C	NA for I	S in mode	rate seisn	nicity
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C					NC		
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	C				NA for I	S in mode	rate seisn	nicity
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	C				NA for I	S in mode	rate seisn	nicity
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C	С	(	С		NA		





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			Nonstructural Recovery Sub-	rating							
ASCE 31 Tier 2				Co		Required ub-Rating	for				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C	С			NA		
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	С			NC		
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	C	С		NA for L	S in mode	rate seism	nicity
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	C	С		NA for L	S in mode	rate seism	nicity
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C				NA for I	S in mode	rate seism	nicity
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	. C	С	С		NA		
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	С	С		NA		
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	C	С	С	NA for I	S in mode	rate seism	nicity
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	C	С	С	NA for I	S in mode	rate seism	nicity
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	. C	С			NA		
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C			NA for I	S in mode	rate seism	nicity
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	. C	С		NA for I	S in mode	rate seism	nicity
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	. C	С		NA for I	S in mode	rate seism	nicity
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	С	С		NA		
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	С	С	NA for I	S in mode	rate seism	nicity
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	С	С	NA for I	S in mode	rate seism	nicity
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	. C	С		NA for L	S in mode	rate seism	nicity
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	C	С		NA for L	S in mode	rate seism	nicity
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	C	С		NA for L	S in mode	rate seism	nicity
4 8.16.7	Supplemental	Elevators	BRACKETS	C	C	С		NA for I	S in mode	rate seism	nicity
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C	С		NA for L	S in mode	rate seism	nicity
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	С	C	С		NA for I	S in mode	rate seism	nicity

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





			S2 (Steel Bra	ced Frames - Stiff Diaphragms)							
ASCE 31 Tier 2					Co		Required ub-Rating				
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC I	NA L
4 3.1.1	Basic	Building System	General	LOAD PATH	С	С	C	С		С	
4 3.1 2	Basic	Building System	General	ADJACENT BUILDINGS	С	С	C			U	
4 3.1 3	Basic	Building System	General	MEZZANINES	С	С	C			NA	
4 3.2.1	Basic	Building System	Configuration	WEAK STORY	С	C	C	С		С	
4 3.2 2	Basic	Building System	Configuration	SOFT STORY	С	С	C	С		С	
4 3.2 3	Basic	Building System	Configuration	GEOMETRY	С	С	C	C		С	
4 3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	С	С	C	C		С	
4 3.2 5	Basic	Building System	Configuration	MASS	С	C	C	С		С	
4 3.2.6	Basic	Building System	Configuration	TORSION	С	С	C	С		С	
4.4.1 3.2	Basic	Lateral Force Resisting System	Moment Frames	AXIAL STRESS CHECK, steel columns	С	С	C	С		С	
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (LS)	С	С	C			С	
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (IO)	С					NA for	LS
4.4.3.1.2	Basic	Lateral Force Resisting System	Braced Frames	AXIAL STRESS CHECK, steel diagonals	С	С	C	С		NC	
4.4.3.1.3	Basic	Lateral Force Resisting System	Braced Frames	COLUMN SPLICES, braced frames	С					NA for	LS
4.6.2 2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (LS)	С	C	C	C		С	
4.6.2 2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (IO)	С					NA for	LS
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (LS)	С	С	C	C		С	
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (IO)	С					NA for	LS
4.4.1 3.7	Supplemental	Lateral Force Resisting System	Moment Frames	COMPACT MEMBERS	С	C	C			U	
4.4.3.1.4	Supplemental	Lateral Force Resisting System	Braced Frames	SLENDERNESS OF DIAGONALS	С	С	C	C		U	
4.4.3.1.5	Supplemental	Lateral Force Resisting System	Braced Frames	CONNECTION STRENGTH	С	С	C			U	
4.4.3.1.6	Supplemental	Lateral Force Resisting System	Braced Frames	OUT-OF-PLANE BRACING, steel braced frames	С					NA for	LS
4.4.3 2.1	Supplemental	Lateral Force Resisting System	Braced Frames	K-BRACING	С	C	C	С		С	
4.4.3 2.2	Supplemental	Lateral Force Resisting System	Braced Frames	TENSION-ONLY BRACES	С					С	
4.4.3 2.3	Supplemental	Lateral Force Resisting System	Braced Frames	CHEVRON BRACING	С					NA for	LS
4.4.3 2.4	Supplemental	Lateral Force Resisting System	Braced Frames	CONCENTRICALLY BRACED FRAME JOINTS	С					NA for	LS
4 5.1 5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (LS)	С	С	C			С	
4 5.1 5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (IO)	С					NA for	LS
4 5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	С					NA for	LS
4 5.1 8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	С					NA for	LS
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	С	С	C			С	
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	С					NA for	LS

Note: C=Compliance required for the safety sub-rating shown





		Geolo	gic Site Hazards and Foundations								
ASCE 31 Tier 2				Со	mpliance Safety su	Required ub-Rating					
Section	Checklist	Heading	Item	5-Star	-Star 4-Star 3-Star 2-Star				NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	С	C	С		(	;	
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	c c c		(	;			
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	С	C	С		(	;	
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	С	C	С		N	A	
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	С	C			(	;	
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	С	C			(	;	
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C					NA f	or LS	
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C					NA f	or LS	

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building:	CAU26U	ROBERT F. PECKHAMICOURTE	Nonstructural Safety Sub-rat	ing							
ASCE 31 Tier 2				Со	•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	C	-			NA	١	
4 8.1 2	Supplemental	Partitions	DRIFT	С	C				NA	١	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С					U		
4 8.1.4	Supplemental	Partitions	TOPS	С					U		
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С					С		
4 8.2.1	Basic	Ceilings	SUPPORT	С					С		
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С					С		
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С	`				С		
4 8.2 5	Supplemental	Ceilings	EDGES	С					U		
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С					U		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С					С		
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С					С		
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С					U		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С					U		
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	`				С		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	C				С		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С					С		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	C				С		
4 8.4.6	Basic	Cladding & glazing	INSERTS	С					С		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С					С		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С					U		
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С					U		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С					NA		
4 8.5 2	Basic	Masonry Veneer	TIES	С					NA		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С					NA		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	С					NA		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С					NA		
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С					NA		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	C				NA		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	C				NA		
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С					NA		
4 8.8.1	Basic	Appendages	URM PARAPETS	С					NA	١	
4 8.8 2	Basic	Appendages	CANOPIES	С	C				U		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С		_			NA	١	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С		C			U		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С					U		
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С					NA		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С		_			NA	١	
4 8.10.1	Basic	Stairs	URM WALLS	С					U		
4 8.10.2	Basic	Stairs	STAIR DETAILS	С					U		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С					NC		
4 8.11.2	Supplemental	Contents	FILE CABINETS	С					NC		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	C				NA		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С					NA		
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C		C			NC		





			Nonstructural Safety Sub-ratir	ng				
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	С	С	С		U
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	С	С	С		U
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	С	С			U
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	С				U
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	С				U
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	С				U
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	С	С	С	С	U
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	С	С	С		NC
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	С				NC
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	С				U
4 8.13.5	Supplemental	Piping	C-CLAMPS	С				U
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	С	С	С		U
4 8.14.2	Supplemental	Ducts	DUCT BRACING	С				NC
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	С				NC
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	С	С	С	С	U
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	С	С	С		U
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	С	С	С		U
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	С				С
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	С				U
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	С				U
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	С				U
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	С				U
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	С				U
4 8.16.7	Supplemental	Elevators	BRACKETS	С				U
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	С			,	U
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	С				U

Note: C=Compliance required for the nonstructural safety sub-rating shown.





Building:	CAU26U	ROBERT F. PECKHAMICOURTE	Nonstructural Safety Sub-rat	ing							
ASCE 31 Tier 2				Со	•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	C	-			NA	١	
4 8.1 2	Supplemental	Partitions	DRIFT	С	C				NA	١	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С					U		
4 8.1.4	Supplemental	Partitions	TOPS	С					U		
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С					С		
4 8.2.1	Basic	Ceilings	SUPPORT	С					С		
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С					С		
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С	`				С		
4 8.2 5	Supplemental	Ceilings	EDGES	С					U		
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С					U		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С					С		
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С					С		
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С					U		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С					U		
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	`				С		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	C				С		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С					С		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	C				С		
4 8.4.6	Basic	Cladding & glazing	INSERTS	С					С		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С					С		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С					U		
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С					U		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С					NA		
4 8.5 2	Basic	Masonry Veneer	TIES	С					NA		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С					NA		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	С					NA		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С					NA		
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С					NA		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	C				NA		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	C				NA		
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С					NA		
4 8.8.1	Basic	Appendages	URM PARAPETS	С					NA	١	
4 8.8 2	Basic	Appendages	CANOPIES	С	C				U		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С		_			NA	١	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С		C			U		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С					U		
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С					NA		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С		_			NA	١	
4 8.10.1	Basic	Stairs	URM WALLS	С					U		
4 8.10.2	Basic	Stairs	STAIR DETAILS	С					U		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С					NC		
4 8.11.2	Supplemental	Contents	FILE CABINETS	С					NC		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	C				NA		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С					NA		
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C		C			NC		





			Nonstructural Safety Sub-ratir	ng				
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	С	С	С		U
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	С	С	С		U
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	С	С			U
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	С				U
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	С				U
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	С				U
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	С	С	С	С	U
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	С	С	С		NC
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	С				NC
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	С				U
4 8.13.5	Supplemental	Piping	C-CLAMPS	С				U
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	С	С	С		U
4 8.14.2	Supplemental	Ducts	DUCT BRACING	С				NC
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	С				NC
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	С	С	С	С	U
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	С	С	С		U
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	С	С	С		U
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	С				С
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	С				U
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	С				U
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	С				U
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	С				U
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	С				U
4 8.16.7	Supplemental	Elevators	BRACKETS	С				U
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	С			,	U
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	С				U

Note: C=Compliance required for the nonstructural safety sub-rating shown.





			S2A (Steel Brace	d Frames - Flexible Diaphragms)								
ASCE 31 Tier 2					Co	•	Required sub-Rating					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 3.1.1	Basic	Building System	General	LOAD PATH	C	(		C			:	
4 3.1 2	Basic	Building System	General	ADJACENT BUILDINGS	(	(		C		(	:	
4 3.1 3	Basic	Building System	General	MEZZANINES	(	(				N	A	
4 3.2.1	Basic	Building System	Configuration	WEAK STORY	(			C		N	A	
4 3.2 2	Basic	Building System	Configuration	SOFT STORY	(	(		C C		N	A	
4 3.2 3	Basic	Building System	Configuration	GEOMETRY	(			C		(	;	
4 3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	(	(		C		N	A	
4 3.2 5	Basic	Building System	Configuration	MASS	C	(		C		N	A	
4.4.1 3.2	Basic	Lateral Force Resisting System	Moment Frames	AXIAL STRESS CHECK, steel columns	(	(		C	"C'	by ju	dgeme	ent
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (LS)	C					N	С	
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (IO)	(					N	С	
4.4.3.1.2	Basic	Lateral Force Resisting System	Braced Frames	AXIAL STRESS CHECK, steel diagonals	(	(		C		(	:	
4.4.3.1.3	Basic	Lateral Force Resisting System	Braced Frames	COLUMN SPLICES, braced frames	(					N	A	
4.6.2 2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (LS)	(	(		C		(	:	
4.6.2 2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (IO)	(					NA f	or LS	$\neg \neg$
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (LS)	(	(		C		(	;	
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (IO)	(					NA f	or LS	
4.4.1 3.7	Supplemental	Lateral Force Resisting System	Moment Frames	COMPACT MEMBERS	(	(		C		ι	J	
4.4.3.1.4	Supplemental	Lateral Force Resisting System	Braced Frames	SLENDERNESS OF DIAGONALS	(	(		C		ι	J	
4.4.3.1.5	Supplemental	Lateral Force Resisting System	Braced Frames	CONNECTION STRENGTH	(	(		C		N	С	
4.4.3.1.6	Supplemental	Lateral Force Resisting System	Braced Frames	OUT-OF-PLANE BRACING, steel braced frames	(					NA f	or LS	
4.4.3 2.1	Supplemental	Lateral Force Resisting System	Braced Frames	K-BRACING	(	(		C		(		
4.4.3 2.2	Supplemental	Lateral Force Resisting System	Braced Frames	TENSION-ONLY BRACES	(					NA f	or LS	
4.4.3 2.3	Supplemental	Lateral Force Resisting System	Braced Frames	CHEVRON BRACING	(					NA f	or LS	
4.4.3 2.4	Supplemental	Lateral Force Resisting System	Braced Frames	CONCENTRICALLY BRACED FRAME JOINTS	(					NA f	or LS	
4 5.1 2	Supplemental	Diaphragms	General	CROSS TIES	(	(		C		(	:	
4 5.1 5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (LS)	(	(		C		(	:	
4 5.1 5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (IO)	(					NA f	or LS	
4 5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	(					NA f	or LS	
4 5.1 8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	(					NA f	or LS	
4 5.2.1	Supplemental	Diaphragms	Wood Diaphragms	STRAIGHT SHEATHING (LS)	(	. (				N	A	
4 5.2.1	Supplemental	Diaphragms	Wood Diaphragms	STRAIGHT SHEATHING (IO)	(					N	A	
4 5.2 2	Supplemental	Diaphragms	Wood Diaphragms	SPANS (LS)	(	(		C		N	A	
4 5.2 2	Supplemental	Diaphragms	Wood Diaphragms	SPANS (IO)	(					N	A	
4 5.2 3	Supplemental	Diaphragms	Wood Diaphragms	UNBLOCKED DIAPHRAGMS (LS)	(	(				N	A	
4 5.2 3	Supplemental	Diaphragms	Wood Diaphragms	UNBLOCKED DIAPHRAGMS (IO)	(					N	A	
4 5.3.1	Supplemental	Diaphragms	Metal Deck Diaphragms	NON-CONCRETE FILLED DIAPHRAGMS	(					NA f	or LS	
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	(					N		
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	C					N		$\overline{}$

Note: C=Compliance required for the safety sub-rating shown



CA0269

**Building:** 



PASEO INT'L - OTAY MESA - COMMERCIAL INSPECTION BUILDING

	Geologic Site Hazards and Foundations												
ASCE 31 Tier 2				Со	mpliance Safety si	Required ub-Rating							
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U		
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	С	C	С		(	;			
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	c c c			(	;					
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	С	C	С		(	;			
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	С	C	С		N	A			
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	С	C			(	:			
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	С	C			(	;			
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C					N	A			
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C			NA f	or LS					

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





Building:			Nonstructural Safety Sub-	rating							
ASCE 31 Tier 2				Co	mpliance Safety si	Required tub-Rating	for				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	C	С			N	A	
4 8.1 2	Supplemental	Partitions	DRIFT	C	C				N	Α	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C					ı	J	
4 8.1.4	Supplemental	Partitions	TOPS	C					ı	J	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	C	С			N	Α	
4 8.2.1	Basic	Ceilings	SUPPORT	C	C				N	IC	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C	C				N	IC	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C	C				ı	J	
4 8.2 5	Supplemental	Ceilings	EDGES	C					ı	J	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	C					ı	J	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C	C	С			N	IC	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C	C				Į	J	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C					Į	J	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C					Į	J	
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	C	С			N	Α	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C	С	С			N	Α	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C	С	С			N	Α	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	С	С			N	Α	
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	С	С			N	Α	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C	С	С			N	Α	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C	С	С			N	Α	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	С				N	Α	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C	С	С			N	Α	
4 8.5 2	Basic	Masonry Veneer	TIES	C	С	С			N	Α	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	С	С			N	Α	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C	С				N	Α	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C	С				N	Α	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	С				N	Α	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	С				NC but no	t a LS issu	е
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	С				N	Α	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C					N	Α	
4 8.8.1	Basic	Appendages	URM PARAPETS	C	С	С			N	Α	
4 8.8 2	Basic	Appendages	CANOPIES	C	С	С			ı	J	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C	С	С			N	Α	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	С	С			N	Α	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C					N	Α	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С	С	С			N	Α	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С	С	С			N	Α	
4 8.10.1	Basic	Stairs	URM WALLS	C	С	С			N	Α	
4 8.10.2	Basic	Stairs	STAIR DETAILS	C	С	С			N	Α	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C	С	С				IC	
4 8.11.2	Supplemental	Contents	FILE CABINETS	C	C					IC	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C	1					Α	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C						Α	
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C	С	С			N	IC	





			Nonstructural Safety Sub-ra	iting							
ASCE 31 Tier 2				Co	•	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	. (				•	U	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	. (		C			U	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C	. (					U	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C						U	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C						U	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C						U	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	. (				ľ	VC	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	. (		C			U	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	C						U	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C						U	
4 8.13.5	Supplemental	Piping	C-CLAMPS	C						U	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	. (		C		N	NΑ	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C					ľ	IC .	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C					ľ	IC .	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	. (		0			U	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	. (		C			U	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	. (		C			U	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C					N	۱A	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C					ı	NΑ	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C					N	NΑ	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	С					- 1	NΑ	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C					1	NΑ	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C					ı	NΑ	
4 8.16.7	Supplemental	Elevators	BRACKETS	С					- 1	NΑ	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C					-	NΑ	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C					N	NΑ	

Note: C=Compliance required for the nonstructural safety sub-rating shown.





Building:	CAU269		structural Recovery Sub-rating								
ASCE 31 Tier 2					Safety s	Required					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	(					NA	
4 8.1 2	Supplemental	Partitions	DRIFT	С	(					NA	
4 8.1.4	Supplemental	Partitions	TOPS	С	(					U	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С						U	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С						NA	
4 8.2.1	Basic	Ceilings	SUPPORT	С						NC	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С						U	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С						NC	
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	С						U	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	С						U	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С	(		C			U	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С	(		0			NC	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С	(		C			U	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С						U	
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	(					NA	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	(					NA	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С	(					NA	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	(					NA	
4 8.4.6	Basic	Cladding & glazing	INSERTS	С	(					NA	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	(					NA	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С						NA	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	(					NA	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	(					NA	
4 8.5 2	Basic	Masonry Veneer	TIES	С	(					NA	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С	(					NA	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С	(					NA	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С	(					NA	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С						NA	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С	(			NC	but n	ot a LS	issue
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С						NA	
4 8.8.1	Basic	Appendages	URM PARAPETS	С						NA	
4 8.8 2	Basic	Appendages	CANOPIES	С						U	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С						NA	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С						NA	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С				ļ		NA	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С						NA	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С						NA	
4 8.10.2	Basic	Stairs	STAIR DETAILS	С	(		C	ļ		NA	
4 8.10.1	Basic	Stairs	URM WALLS	С	(					NA	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С	(			ļ		NA	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С			C			NA	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С			ļ	ļ		NC	
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	С						NC	
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	С						U	
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С	(		C			NC	





		Nor	structural Recovery Sub-rating								
ASCE 31 Tier 2				Co	-	Required ub-Rating	for				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C	C				U	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	C				U	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	C	C				U	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	C	C				U	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C	C				U	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C						U	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	C	С			U	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	C	С		ı	IC	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	C	C	C			U	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	C	C	C			U	
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	C	C			U		
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C					U	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C	C			N	ΙA	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	C	C			N	IC	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C	C			ı	IC	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	C	C			U	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	C	C			U	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	C	C			U	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C	C			N	lΑ	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C	C			N	lΑ	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C	C			N	lΑ	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	C	C			N	IΑ	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	C	C			N	IΑ	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	C	C			N	IΑ	
4 8.16.7	Supplemental	Elevators	BRACKETS	C	C	C			N	IΑ	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C	C			N	lΑ	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C	С	С			N	lΑ	

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





bullullig.	AK0013	FED BLDG,CKTH, Alla USPO		62 (Steel Braced Frames - Stiff Diaphragms)								
	1			52 (Steel Braced Frames - Stiff Diaphragms)					,	T	1	T
ASCE 31					Co	mpliance	Required	for				
Tier 2						Safety s	ub-Rating					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.3.1.1	Basic	Building System	General	LOAD PATH	(		. (	С			С	
4.3.1.2	Basic	Building System	General	ADJACENT BUILDINGS	(		(				С	
4.3.1.3	Basic	Building System	General	MEZZANINES	(		(				NA	
4.3.2.1	Basic	Building System	Configuration	WEAK STORY	(		(	C			С	
4.3.2.2	Basic	Building System	Configuration	SOFT STORY	(		(	C			С	
4.3.2.3	Basic	Building System	Configuration	GEOMETRY	(		(	C			С	
4.3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	(		(	C			С	
4.3.2.5	Basic	Building System	Configuration	MASS	(		(	C			С	
4.3.2.6	Basic	Building System	Configuration	TORSION	(		(	C			С	
4.4.1.3.2	Basic	Lateral Force Resisting System	Moment Frames	AXIAL STRESS CHECK, steel columns	(			C			С	
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (LS)	(						С	
4.4.3.1.1	Basic	Lateral Force Resisting System	Braced Frames	REDUNDANCY, braced frames (IO)	(					N	IA for LS	
4.4.3.1.2	Basic	Lateral Force Resisting System	Braced Frames	AXIAL STRESS CHECK, steel diagonals	(		(	C	"C" based	d on general c	onclusions about	the building
4.4.3.1.3	Basic	Lateral Force Resisting System	Braced Frames	COLUMN SPLICES, braced frames	(						С	
4.6.2.2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (LS)			(	C			С	
4.6.2.2	Basic	Connections	Shear Transfer	TRANSFER TO STEEL FRAMES (IO)	(					N	IA for LS	
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (LS)	(		(	C			С	
4.6.3.1	Basic	Connections	Vertical Components	STEEL COLUMNS (IO)	(					N	IA for LS	
4.4.1.3.7	Supplemental	Lateral Force Resisting System	Moment Frames	COMPACT MEMBERS	(						С	
4.4.3.1.4	Supplemental	Lateral Force Resisting System	Braced Frames	SLENDERNESS OF DIAGONALS	(		(	C	"C" based	d on general c	onclusions about	the building
4.4.3.1.5	Supplemental	Lateral Force Resisting System	Braced Frames	CONNECTION STRENGTH	(		(		"C" based	d on general c	onclusions about	the building
4.4.3.1.6	Supplemental	Lateral Force Resisting System	Braced Frames	OUT-OF-PLANE BRACING, steel braced frames	(					N	IA for LS	
4.4.3.2.1	Supplemental	Lateral Force Resisting System	Braced Frames	K-BRACING	(			C			С	
4.4.3.2.2	Supplemental	Lateral Force Resisting System	Braced Frames	TENSION-ONLY BRACES	(						С	
4.4.3.2.3	Supplemental	Lateral Force Resisting System	Braced Frames	CHEVRON BRACING	(						NC	
4.4.3.2.4	Supplemental	Lateral Force Resisting System	Braced Frames	CONCENTRICALLY BRACED FRAME JOINTS							С	
4.5.1.5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (LS)	(						С	
4.5.1.5	Supplemental	Diaphragms	General	OPENINGS AT BRACED FRAMES (IO)	(					N	IA for LS	
4.5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	(					N	IA for LS	
4.5.1.8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	(					N	IA for LS	
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	(		(				NA	
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	(						NA	

Note: C=Compliance required for the safety sub-rating shown





		Geolo	gic Site Hazards and Foundations								
ASCE 31 Tier 2				Со	mpliance Safety s	Required ub-Rating					
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	C	C	С		(	2	
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	C	C			(	C	
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	C	C	C		(		
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	C	C	С		N	Α	
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	C	C			(	2	
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	C	C			(	2	
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C	;				N	Α	
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C					(	2	

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown





		No	onstructural Safety Sub-rating										
ASCE 31 Tier 2				Co	mplianc Safety	e Requ sub-Ra		for					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Sta	ar	2-Star	С	N	IC N	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	(		С	С				NA		
4 8.1 2	Supplemental	Partitions	DRIFT	C		С					NA		
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C							U		
4 8.1.4	Supplemental	Partitions	TOPS	C							U		
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C		С	С				NA		
4 8.2.1	Basic	Ceilings	SUPPORT	C		С					U		
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C		С					NC		
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C		C					U		
4 8.2 5	Supplemental	Ceilings	EDGES	C							U		
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	C							U		
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C		С	С				U		
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C		С					U		
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C							U		
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C							U		
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C		С	С				С		
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C		С	С				U		
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C		С	С				U		
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C		С	С				U		
4 8.4.6	Basic	Cladding & glazing	INSERTS	C		С	С				U		
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C		С	С				U		
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C		С	С				U		
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	1	С					U		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C		С	С				NA		
4 8.5 2	Basic	Masonry Veneer	TIES	C		С	С				NA		
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C		С	С				NA		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C		С					NA		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C		С					NA		
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C		С					NA		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C		С					NA		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C		С					NA		
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	C							NA		
4 8.8.1	Basic	Appendages	URM PARAPETS	C		С	С				NA		
4 8.8 2	Basic	Appendages	CANOPIES	C		С	С				NA		
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C		С	С				NA		
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C	1	С	С				NA		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C							NA		
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C		С	С				NA		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C		С	С		<u> </u>		NA		
4 8.10.1	Basic	Stairs	URM WALLS	C	1	С	С		ļ		U		
4 8.10.2	Basic	Stairs	STAIR DETAILS	C	1	С	С		ļ		U		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C		С	С		ļ	NC	presu	med	t
4 8.11.2	Supplemental	Contents	FILE CABINETS	C		С			ļ		U		
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C		С					U		
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C					ļ		U		
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C		С	С		<u> </u>		U		





Building:	AKUU13	FED BLDG,CRTH, And USPO									
		No	nstructural Safety Sub-rating								
ASCE 31 Tier 2				Co	ompliance Safety s	Required					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	(	0		С			U	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	(			С			U	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	(						U	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	(	C					U	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	(	C					U	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	(	C					U	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	(			C C			U	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	(	0		С			U	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	(	C					U	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	(	C					U	
4 8.13.5	Supplemental	Piping	C-CLAMPS	(	C					U	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	(	0		С			U	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	(	C					U	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	(	C					U	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	(	0		C C			U	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	(			С			U	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	(			С		- 1	NΑ	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	(	C					NC	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(	C					U	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	(	C					U	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	(	C					U	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	(						U	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	(						U	
4 8.16.7	Supplemental	Elevators	BRACKETS	(						U	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	(						U	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	(						U	

Note: C=Compliance required for the nonstructural safety sub-rating shown.





		Non	structural Recovery Sub-rating								
ASCE 31 Tier 2			Compliance Required for Safety sub-Rating								
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	(				N	NΑ	
4 8.1 2	Supplemental	Partitions	DRIFT	С	(				١	NΑ	
4 8.1.4	Supplemental	Partitions	TOPS	С	(					U	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	_						U	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	С	(				١	NΑ	
4 8.2.1	Basic	Ceilings		_						U	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	_						U	
4 8.2 2	Intermediate	Ceilings		С					1	VC	
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	С						U	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	С						U	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С	(					U	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	С	(					U	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С	(	(				U	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С						U	
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	(					С	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	(					U	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	С	(					U	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	С	(					U	
4 8.4.6	Basic	Cladding & glazing	INSERTS	С	(					U	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	(					U	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	С	(					U	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	С	(					U	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	(				١	NΑ	
4 8.5 2	Basic	Masonry Veneer	TIES	С	(				١	NΑ	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С	(				١	NΑ	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	С	(				١	NΑ	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	С	(				١	NΑ	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С	(				١	NΑ	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	С					١	NΑ	
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	(				١	NΑ	
4 8.8.1	Basic	Appendages	URM PARAPETS	С	(				١	NΑ	
4 8.8 2	Basic	Appendages	CANOPIES	С					١	NΑ	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	(				N	NΑ	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С					N	NΑ	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С	(				١	NΑ	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	С	(				١	NΑ	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	С					1	NΑ	
4 8.10.2	Basic	Stairs								U	
4 8.10.1	Basic	Stairs	URM WALLS	С						U	
4 8.11.4	Supplemental	Contents								U	
4 8.11.5	Supplemental	Contents				(				U	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С					NC pre	esume	d
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	С						U	
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	С						U	-
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С	(	. (				U	





_		Nor	structural Recovery Sub-rating								
ASCE 31 Tier 2					Safety s	Required ub-Rating	1				
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C		C				U	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	. c	C				U	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	C	C				U	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	C	C				U	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	C	C	,			U	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C						U	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	C	C			U	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C	C	С			U	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	. C	C	С			U	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	. C	C	С			U	
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	. C	C				U	
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	C					U	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C	C				U	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	C	C				U	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	C	C				U	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C	C	С			U	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	C	C	С			U	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	C	С		N	IΑ	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	C	C			ı	IC	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	C	C				U	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	C	С				U	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	C	С				U	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	C	C				U	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	С	C	С				U	
4 8.16.7	Supplemental	Elevators	BRACKETS	C	C	C				U	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	C	C				U	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C	C	C				U	

 $Note: C= Compliance\ required\ for\ the\ nonstructural\ recovery\ sub-rating\ shown,\ unless\ otherwise\ noted.$ 

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





		G	eologic Site Hazards and Foundations								
ASCE 31 Tier 2				Co	•	Required ub-Rating					
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C			C		C	;	
4.7.1.2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	C			С			
4.7.1.3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C			C		C	:	
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C			C		C	;	
4.7.3.2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C					C	;	
4.7.3.3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C					C	:	
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C					applies	to IO <sup>(2)</sup>	
4.7.3.5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C					applies	to IO (2)	

### Notes:

<sup>1)</sup> C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown

<sup>2) &</sup>quot;Applies to IO" indicates that this statement was not verified for IO performance, hence it cannot be answered definitively





Building:	LA Federal C		Nonstructural Safety Sub-	rating							
			Notisti uctural Safety Sub-		mpliance	Paguirad	for		Τ		
ASCE 31 Tier 2					•	ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star		3-Star	2-Star	с	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	C		2 3(4)			C	
4 8.1 2	Supplemental	Partitions	DRIFT	C	С					<u>-</u> C	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С					applies	to IO (2)	
4 8.1.4	Supplemental	Partitions	TOPS	C						to IO (2)	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	С	(				C	
4 8.2.1	Basic	Ceilings	SUPPORT	C	С					<u>-</u> C	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С	С					С	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C	С					С	
4 8.2 5	Supplemental	Ceilings	EDGES	С					applies	to IO (2)	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С						to IO (2)	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C		(				C	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С	С		1			C	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	C						С	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C					applies	to IO (2)	
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C	С	(				С	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	C	С	(				С	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C	С	(				С	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	С	(				С	
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	С					С	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	С	С					С	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C	С					С	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C						С	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	С	_					IA	
4 8.5 2	Basic	Masonry Veneer	TIES	С						IA	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	С						IA	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C						IA	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C	C					IA	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS							IA	
4 8.7.1 4 8.7 2	Supplemental Supplemental	Masonry Veneer	ANCHORAGE URM BACK-UP		C		-			IA IA	
4 8.6 2	Supplemental	Masonry Veneer Masonry Veneer	OPENINGS		C					IA IA	
4 8.8.1	Basic	Appendages	URM PARAPETS		С	(	-			IA IA	
4 8.8 2	Basic	Appendages	CANOPIES		C					C	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	0						IA	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C						C	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C		Ì				to IO (2)	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C	С	(		<u> </u>		IA	
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C						IA	
4 8.10.1	Basic	Stairs	URM WALLS	C				1		IA	
4 8.10.2	Basic	Stairs	STAIR DETAILS	C	_	_		1		C	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C						<u>c</u> C	
4 8.11.2	Supplemental	Contents	FILE CABINETS	C						<u>c</u>	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C			1			IA	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C			1	1		to IO (2)	





Building.	LA Tederal Co		Nonstructural Safety Sub-ra	iting							
ASCE 31 Tier 2			,	T -	•	e Required sub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C		С	С				
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C		С	С		(	Ĵ	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C		C	С			2	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C	)	С				2	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C						to IO (2)	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C					applies	to IO (2)	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C					applies	to IO (2)	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C		С	C C			2	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C		С	С			2	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	C					applies	to IO (2)	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C						to IO <sup>(2)</sup>	
4 8.13.5	Supplemental	Piping	C-CLAMPS	C					applies	to IO <sup>(2)</sup>	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C		С	С		(	2	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C					applies	to IO (2)	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C					applies	to IO (2)	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C		С	C C		N	Α	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C		C	С		(	2	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	1	С	С			2	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	:					to IO (2)	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C						to IO (2)	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C					applies	to IO (2)	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C					applies	to IO (2)	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C					applies	to IO (2)	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C					applies	to IO <sup>(2)</sup>	
4 8.16.7	Supplemental	Elevators	BRACKETS	C					applies	to IO (2)	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C					applies		_
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C					applies	to IO (2)	

### Notes:

<sup>1)</sup> C=Compliance required for the nonstructural safety sub-rating shown.

<sup>2) &</sup>quot;Applies to IO" indicates that this statement was not verified for IO performance , hence it cannot be answered definitively.





		Nor	structural Recovery Sub-ratin	g							
ASCE 31 Tier 2				Co	mpliance Safety s	Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	N	Aι
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C	C					С	
4 8.1 2	Supplemental	Partitions	DRIFT	C	C					С	
4 8.1.4	Supplemental	Partitions	TOPS	C	C					С	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C					applies	s to I	R <sup>(2)</sup>
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C	C					С	
4 8.2.1	Basic	Ceilings	SUPPORT	C	C					С	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	C						С	
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	C						С	
4 8.2 5	Supplemental	Ceilings	EDGES <sup>a</sup>	C					applies	s to I	R <sup>(2)</sup>
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	C					applies	s to I	R <sup>(2)</sup>
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C	C	(				С	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C	C	(				С	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	С	C	(				С	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	C					applies	s to I	R <sup>(2)</sup>
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	С	C					С	
4 8.4 3	Basic	Cladding & glazing	CLADDING ISOLATION	С	C					С	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS	C	C					С	
4 8.4 5	Basic	Cladding & glazing	BEARING CONNECTIONS	C	C					С	
4 8.4.6	Basic	Cladding & glazing	INSERTS	C	C					С	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C	C					С	
4 8.4 8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C	C					С	
4 8.4 9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C	C					С	
4 8.5.1	Basic	ıvıasonry veneer	SHELF ANGLES (LS)	L					IN	IΑ	
4 8.5 2	Basic	Masonry Veneer	TIES	C					N	ΙA	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C	_					lΑ	
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C						ΙA	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C	_					ΙA	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С	C					lΑ	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C	C					ΙA	
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	C	C					IA	
4 8.8.1	Basic	Appendages	URM PARAPETS	C						IA.	
4 8.8 2	Basic	Appendages	CANOPIES	C	C					C	
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	C	C					IA.	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C						<u>C</u>	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C	_					U	
4 8.9.1 4 8.9 2	Basic	Chimneys	URM CHIMNEYS	C	C		1			IA IA	
4 8.9 2	Intermediate Basic	Chimneys Stairs	ANCHORAGE STAIR DETAILS			(		1		C C	
4 8.10.2	Basic	Stairs	URM WALLS		_		•	-		IA	
4 8.10.1	Supplemental	Contents	ACCESS FLOORS				-			IA IA	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS							IA	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C			1	1		C	
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>			-	1	<u> </u>		c C	
	<u> </u>	1				-	1	-		-	ID(2)
4 8.11.3	Supplemental Basic	Contents  Mechanical & electrical equipment	CABINET DOORS AND DRAWERS <sup>a</sup> EMERGENCY POWER	C					applies	s to I	K'-'





		Nor	structural Recovery Sub-rating								
ASCE 31 Tier 2				Co	Safety	Required sub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	(	(	C C	,		(	2	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	(	(	C C			(	2	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	(					ι	J	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	(					ι	J	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	(		C			ι	J	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	(					(		
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING			C	C		(	2	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	(		C	С		(	;	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	(		C	C		Į	J	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	(		C	C		(	;	
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	(		C			(	;	
4 8.13.5	Supplemental	Piping	C-CLAMPS	(		C			Į	J	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	(		C			(	;	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	(		C			Į	J	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	(	(	C C			ι	J	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	(	) (	C C	C		(	2	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	(		C	C		N	A	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	(		C	C		(	;	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	(	(	C C			ι	J	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	(	) (	C C			ι	J	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	(	) (	C C			ι	J	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	(	) (	C C			ι	J	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	(		C C			ι	J	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	(		C C			ι	J	
4 8.16.7	Supplemental	Elevators	BRACKETS	(		C C			ι	J	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	(		C C			ι	J	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	(		C C			ι	J	

## Notes:

<sup>1)</sup> C=Compliance required for the nonstructural recovery sub-rating shown, unless otherwise noted.

<sup>2) &</sup>quot;Applies to IR" indicates that this statement has not been evaluated for recovery immediately or within days

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.





Dunumg.	30 011 1 1020		C2 (Concrete	Shear Walls-Stiff Diaphragms)								
ASCE 31 Tier 2					Co	•	Required					
Section	Checklist	Heading	Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 3.1.1	Basic	Building System	General	LOAD PATH	(			C C		С	•	
4 3.1 3	Basic	Building System	General	MEZZANINES	(			C		N/	4	
4 3.2.1	Basic	Building System	Configuration	WEAK STORY	(			C C		С		
4 3.2 2	Basic	Building System	Configuration	SOFT STORY	(			c c		С		
4 3.2 3	Basic	Building System	Configuration	GEOMETRY	(			C C		С		
4 3.2.4	Basic	Building System	Configuration	VERTICAL DISCONTINUITIES	(			C C		С		
4 3.2 5	Basic	Building System	Configuration	MASS	(			C C		С		
4 3.2.6	Basic	Building System	Configuration	TORSION	(			C C		С		
4 3.3 5	Basic	Building System	Condition of Materials	POST-TENSIONING ANCHORS	(			C		N/	A	
4.4.1.6.1	Basic	Lateral Force Resisting System	Moment Frames	COMPLETE FRAMES	(			C		С		
4.4.2.1.1	Basic	Lateral Force Resisting System	Shear Walls	REDUNDANCY, shear walls	(	(		С		С		
4.4.2 2.1	Basic	Lateral Force Resisting System	Shear Walls	SHEAR STRESS CHECK, concrete walls	(	(		C C		С		
4.4.2 2.2	Basic	Lateral Force Resisting System	Shear Walls	REINFORCING STEEL, non-tilt-up concrete walls	(	(		C C		С		
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (LS)	(	(		C C		С		
4.6.2.1	Basic	Connections	Shear Transfer	TRANSFER TO SHEAR WALLS (IO)	(				ï	applies t	o 10 <sup>(2</sup>	2)
4.6.3 5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (LS)	(	. (		C C		С		
4.6.3 5	Basic	Connections	Vertical Components	FOUNDATION DOWELS (IO)	(				ï	applies t	o 10 <sup>(2</sup>	2)
4.4.1.6.2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (LS)	(	. (		С		С		
4.4.1.6.2	Supplemental	Lateral Force Resisting System	Moment Frames	DEFLECTION COMPATIBILITY (IO)	(				ï	applies t	o 10 <sup>(2</sup>	2)
4.4.1.6.3	Supplemental	Lateral Force Resisting System	Moment Frames	FLAT SLABS	(			C C		С		
4.4.2 2.3	Supplemental	Lateral Force Resisting System	Shear Walls	COUPLING BEAMS (LS)	(	(		С		С		
4.4.2 2.3	Supplemental	Lateral Force Resisting System	Shear Walls	COUPLING BEAMS (IO)	(				ï	applies t	o 10 <sup>(2</sup>	2)
4.4.2 2.4	Supplemental	Lateral Force Resisting System	Shear Walls	OVERTURNING, concrete shear walls	(					С		
4.4.2 2.5	Supplemental	Lateral Force Resisting System	Shear Walls	CONFINEMENT REINFORCING	(					С		
4.4.2 2.6	Supplemental	Lateral Force Resisting System	Shear Walls	REINFORCING AT OPENINGS, concrete walls	(					С		
4.4.2 2.7	Supplemental	Lateral Force Resisting System	Shear Walls	WALL THICKNESS, cast-in-place concrete	(					С		
4 5.1.1	Supplemental	Diaphragms	General	DIAPHRAGM CONTINUITY	(	(		C C		С		
4 5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (LS)	(	(		С		С		
4 5.1.4	Supplemental	Diaphragms	General	OPENINGS AT SHEAR WALLS (IO)	(					applies t	o 10 <sup>(2</sup>	2)
4 5.1.7	Supplemental	Diaphragms	General	PLAN IRREGULARITIES	(					С		
4 5.1 8	Supplemental	Diaphragms	General	DIAPHRAGM REINFORCEMENT AT OPENINGS	(					С		
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (LS)	(			С		С		
4.6.3.10	Supplemental	Connections	Vertical Components	UPLIFT AT PILE CAPS (IO)	(					applies t	o 10 <sup>(2</sup>	2)

## Notes:

1) C=Compliance required for the safety sub-rating shown

2) "Applies to IO" indicates that this statement was not verified for IO performance , hence it cannot be answered definitively.





		Geolog	gic Site Hazards and Foundations												
ASCE 31 Tier 2				Compliance Required for Safety sub-Rating						1					
Section	Checklist	Heading	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U				
4.7.1.1	Geologic Site Hazards and Foundations	Geologic Site Hazards	LIQUEFACTION	C	C	C	C		C						
4.7.1 2	Geologic Site Hazards and Foundations	Geologic Site Hazards	SLOPE FAILURE	C	C	(			C	;					
4.7.1 3	Geologic Site Hazards and Foundations	Geologic Site Hazards	SURFACE FAULT RUPTURE	C	C	C	C		C	;					
4.7.3.1	Geologic Site Hazards and Foundations	Capacity of Foundations	POLE FOUNDATIONS	C	C	C	C		N/	A					
4.7.3 2	Geologic Site Hazards and Foundations	Capacity of Foundations	OVERTURNING, foundations	C	C	C			C	:					
4.7.3 3	Geologic Site Hazards and Foundations	Capacity of Foundations	TIES BETWEEN FOUNDATION ELEMENTS	C	C	C			C	;					
4.7.3.4	Geologic Site Hazards and Foundations	Capacity of Foundations	DEEP FOUNDATIONS	C					N/	A					
4.7.3 5	Geologic Site Hazards and Foundations	Capacity of Foundations	SLOPING SITES	C					N/	A					

Note: C=Compliance required for the Geologic Site Hazards and Foundations Safety sub-rating shown

EPRS-ASCE 31 Translation Procedure\_50 UN Plaza.xls 2/29/2016





Building:	50 UN Plaza		Nonstructural Safety Sub-rate	ting							
ASCE 31 Tier 2				Ť							
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	С	C					2	
4 8.1 2	Supplemental	Partitions	DRIFT	С	C				N	С	
4 8.1 3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	С					applies	to IO (2)	
4 8.1.4	Supplemental	Partitions	TOPS	С						to IO (2)	
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C					N N		
4 8.2.1	Basic	Ceilings	SUPPORT	C					(		
4 8.2 2	Intermediate	Ceilings	LAY-IN TILES	С	C					2	
4 8.2 3	Intermediate	Ceilings	INTEGRATED CEILINGS	С	C				(		
4 8.2 5	Supplemental	Ceilings	EDGES	С					annlies	to IO (2)	
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT	С						to IO (2)	
4 8.3 2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C						C	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	С			1		- '		
		<u> </u>		C					applies	-	
4 8.3 3	Supplemental	Light fixtures	PENDANT SUPPORTS	·		-	-			to IO (2)	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS	С							
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS	C					N N		
4 8.4 3	Basic Basic	Cladding & glazing	CLADDING ISOLATION MULTI-STORY PANELS	C					N N		
4 8.4.4	Basic	Cladding & glazing Cladding & glazing	BEARING CONNECTIONS	C					N		
4 8.4.6	Basic	Cladding & glazing	INSERTS	C					- IN		
4 8.4.7	Basic	Cladding & glazing Cladding & glazing	PANEL CONNECTIONS	C					N		
4 8.4 8	Intermediate	Cladding & glazing Cladding & glazing	OVERHEAD GLAZING	C					N		
4 8.4 9	Supplemental	Cladding & glazing Cladding & glazing	GLAZING RESTRAINT	C					N		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	C					N N		
4 8.5 2	Basic	Masonry Veneer	TIES	C		_				C	
4 8.5 3	Basic	Masonry Veneer	WEAKENED PLANES	C					. N		
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (IO)	C					N		
4 8.5 5	Supplemental	Masonry Veneer	MORTAR	C							
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C					N		
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C					N		
4 8.7 2	Supplemental	Masonry Veneer	URM BACK-UP	С	C					С	
4 8.6 2	Supplemental	Masonry Veneer	OPENINGS	С					applies	to IO (2)	
4 8.8.1	Basic	Appendages	URM PARAPETS	C		C				2	
4 8.8 2	Basic	Appendages	CANOPIES	C							
4 8.8 3	Intermediate	Appendages	CONCRETE PARAPETS	С	C	C				A	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	С					-		
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	С					applies	to IO (2)	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C					N		
4 8.9 2	Intermediate	Chimneys	ANCHORAGE	C					N		
4 8.10.1	Basic	Stairs	URM WALLS	C					(		
4 8.10.2	Basic	Stairs	STAIR DETAILS	С					N		
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	С						С	
4 8.11.2	Supplemental	Contents	FILE CABINETS	С	C				N	С	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	С	C				N	A	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	С					applies	to IO (2)	
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	С		C				2	

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bullullig.	JU UN Flaza		Nonstructural Safety Sub-rati	ng							
ASCE 31 Tier 2			Nonstructural surety sub rate	Compliance Required for Safety sub-Rating							
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	C				(	C	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	C	C				С	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C	C					С	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	С					applies	to IO (2)	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C					applies	to IO (2)	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C					applies	to IO (2)	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	C		C			С	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	C	C				С	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING	C					applies	to IO (2)	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C					applies	to IO (2)	
4 8.13.5	Supplemental	Piping	C-CLAMPS	C					applies	to IO (2)	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	C					С	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C					applies	to IO (2)	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C					applies	to IO (2)	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	С	C		С			IA	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	C				(	С	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	C	C				С	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C						to IO (2)	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C					applies	to IO (2)	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C					applies	to IO (2)	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C					applies	to IO (2)	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C					applies	to IO (2)	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	С					applies	to IO (2)	
4 8.16.7	Supplemental	Elevators	BRACKETS	С					applies	to IO (2)	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	С					applies	to IO (2)	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	С					applies	to IO (2)	

#### Notes:

<sup>1)</sup> C=Compliance required for the nonstructural safety sub-rating shown.

<sup>2) &</sup>quot;Applies to IO" indicates that this statement was not verified for IO performance, hence it cannot be answered definitively.





Building:	50 UN Plaza										
		Non	structural Recovery Sub-ratin	g							•
ASCE 31 Tier 2				Co		e Required sub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	. NA	U
4 8.1.1	Basic	Partitions	UNREINFORCED MASONRY	C		С				С	1
4 8.1.2	Supplemental	Partitions	DRIFT	C		С				NC	
4 8.1.4	Supplemental	Partitions	TOPS	C		С				С	
4 8.1.3	Supplemental	Partitions	STRUCTURAL SEPARATIONS	C					appli	es to IR	(2)
4 8.2.4	Intermediate	Ceilings	SUSPENDED LATH AND PLASTER	C		С				NC	
4 8.2.1	Basic	Ceilings	SUPPORT	C		С				С	
4 8.2.3	Intermediate	Ceilings	INTEGRATED CEILINGS	C						С	
4 8.2.2	Intermediate	Ceilings	LAY-IN TILES	C						С	
4 8.2.5	Supplemental	Ceilings	EDGES <sup>a</sup>	C					appli	es to IR	(2)
4 8.2.6	Supplemental	Ceilings	SEISMIC JOINT <sup>a</sup>	C						es to IR	
4 8.3.1	Basic	Light fixtures	EMERGENCY LIGHTING	C		C (			- 1- 1-	С	
4 8.3.2	Intermediate	Light fixtures	INDEPENDENT SUPPORT	C		C (	C			NC	
4 8.3.3	Supplemental	Light fixtures	PENDANT SUPPORTS	C		c (				U	
4 8.3.4	Supplemental	Light fixtures	LENS COVERS						annli	es to IR	(2)
4 8.4.1	Basic	Cladding & glazing	CLADDING ANCHORS			C			appii	NA	1
4 8.4.3	Basic	Cladding & glazing	CLADDING ISOLATION			C				NA	
4 8.4.4	Basic	Cladding & glazing	MULTI-STORY PANELS			C				NA	
4 8.4.5	Basic	Cladding & glazing	BEARING CONNECTIONS	C		C				NA	
4 8.4.6	Basic	Cladding & glazing	INSERTS			C				NA	
4 8.4.7	Basic	Cladding & glazing	PANEL CONNECTIONS	C		C				NA	
4 8.4.8	Intermediate	Cladding & glazing	OVERHEAD GLAZING	C		C				NA	
4 8.4.9	Supplemental	Cladding & glazing	GLAZING RESTRAINT	C		С				NA	
4 8.5.1	Basic	Masonry Veneer	SHELF ANGLES (LS)	(		C				NA	
4 8.5.2	Basic	Masonry Veneer	TIES	C		С				NC	
4 8.5.3	Basic	Masonry Veneer	WEAKENED PLANES	C		С				NA	
4 8.5.5	Supplemental	Masonry Veneer	MORTAR	C		С				С	
4 8.6.1	Supplemental	Masonry Veneer	STUD TRACKS	C		С				NA	
4 8.6.2	Supplemental	Masonry Veneer	OPENINGS	C		С				NA	
4 8.7.1	Supplemental	Masonry Veneer	ANCHORAGE	C		С				NC	
4 8.7.2	Supplemental	Masonry Veneer	URM BACK-UP	C		С				NC	
4 8.8.1	Basic	Appendages	URM PARAPETS	C		С				С	
4 8.8.2	Basic	Appendages	CANOPIES	C		С				С	
4 8.8.3	Intermediate	Appendages	CONCRETE PARAPETS	C		С				NA	
4 8.8.4	Intermediate	Appendages	APPENDAGES (LS)	C		С				С	
4 8.8.4	Intermediate	Appendages	APPENDAGES (IO)	C		С				U	
4 8.9.1	Basic	Chimneys	URM CHIMNEYS	C		С				NA	
4 8.9.2	Intermediate	Chimneys	ANCHORAGE	C		С				NA	
4 8.10.2	Basic	Stairs	STAIR DETAILS	C			C			NA	
4 8.10.1	Basic	Stairs	URM WALLS	C		С				С	
4 8.11.4	Supplemental	Contents	ACCESS FLOORS	C				<u> </u>		NA	
4 8.11.5	Supplemental	Contents	EQUIPMENT ON ACCESS FLOORS	C		C (		<u> </u>		NA	
4 8.11.1	Basic	Contents	TALL NARROW CONTENTS	C			-	<b> </b>		NC	
4 8.11.2	Supplemental	Contents	FILE CABINETS <sup>a</sup>	C						NC	
4 8.11.3	Supplemental	Contents	CABINET DOORS AND DRAWERS <sup>a</sup>	C					appli	es to IR	(2)
4 8.12.1	Basic	Mechanical & electrical equipment	EMERGENCY POWER	C		C (				С	

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		Non	structural Recovery Sub-rating								
ASCE 31 Tier 2				Со		Required ub-Rating					
Section	Checklist	Nonstructural Checklist Section	Item	5-Star	4-Star	3-Star	2-Star	С	NC	NA	U
4 8.12.2	Basic	Mechanical & electrical equipment	HAZARDOUS MATERIAL EQUIPMENT	C	С	C			(	С	
4 8.12.4	Basic	Mechanical & electrical equipment	ATTACHED EQUIPMENT	C	С	С			(	С	
4 8.12.5	Intermediate	Mechanical & electrical equipment	VIBRATION ISOLATORS	C	С	С			l	J	
4 8.12.7	Supplemental	Mechanical & electrical equipment	ELECTRICAL EQUIPMENT	C	С	C			Į	J	
4 8.12.8	Supplemental	Mechanical & electrical equipment	DOORS	C	С	C			Į	J	
4 8.12.6	Supplemental	Mechanical & electrical equipment	HEAVY EQUIPMENT	C					(	С	
4 8.13.1	Basic	Piping	FIRE SUPPRESSION PIPING	C	С	C	C		(	С	
4 8.13.2	Basic	Piping	FLEXIBLE COUPLING	C	С	С	C		(	С	
4 8.13.4	Supplemental	Piping	SHUT-OFF VALVES	C	С	С	C		Į	J	
4 8.13.3	Supplemental	Piping	FLUID AND GAS PIPING, hazmat	C	С	С	C		Į	J	
4 8.13.3	Supplemental	Piping	FLUID PIPING, non hazmat	C	С	C			Į	J	
4 8.13.5	Supplemental	Piping	C-CLAMPS	C	С				Į	J	
4 8.14.1	Intermediate	Ducts	STAIR AND SMOKE DUCTS	C	С	С			(	С	
4 8.14.2	Supplemental	Ducts	DUCT BRACING	C	С	С			Į	J	
4 8.14.3	Supplemental	Ducts	DUCT SUPPORT	C	С	C			Į	J	
4 8.15.1	Basic	Hazardous materials	TOXIC SUBSTANCES	C	С	С	C		(	С	
4 8.15.2	Supplemental	Hazardous materials	GAS CYLINDERS	C	С	С	C		N	IA	
4 8.15.3	Supplemental	Hazardous materials	HAZARDOUS MATERIALS	C	С	С	С		(	С	
4 8.16.1	Supplemental	Elevators	SUPPORT SYSTEM	C	С	C			Į	J	
4 8.16.2	Supplemental	Elevators	SEISMIC SWITCH	C	С	C			Į	J	
4 8.16.3	Supplemental	Elevators	SHAFT WALLS	C	С	С			Į	J	
4 8.16.4	Supplemental	Elevators	RETAINER GUARDS	C	С	С			Į	J	
4 8.16.5	Supplemental	Elevators	RETAINER PLATE	C	С	C			ı	J	
4 8.16.6	Supplemental	Elevators	COUNTERWEIGHT RAILS	C	С	С			Į	J	
4 8.16.7	Supplemental	Elevators	BRACKETS	C	С	С			ı	J	
4 8.16.8	Supplemental	Elevators	SPREADER BRACKET	C	С	C			ı	J	
4 8.16.9	Supplemental	Elevators	GO-SLOW ELEVATORS	C	С	С			Į	J	

# Notes:

1) C=Compliance required for the nonstructural recovery sub-rating shown, unless otherwise noted.

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<sup>2) &</sup>quot;Applies to IR" indicates that this statement has not been evaluated for recovery immediately or within days

<sup>&</sup>lt;sup>a</sup>-These items need not be considered except for purposes of adjusting the nonstructural recovery sub-rating in line 4.3.1.